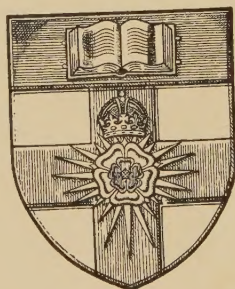


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AN ETRUSCAN CIPPUS IN THE ASHMOLEAN MUSEUM¹

(Plates I–II)

IN 1933 the Moyses Hall Museum at Bury St. Edmunds was reorganised to deal with local history. Its Committee decided to dispose of much material from abroad, and the cippus here discussed was purchased by the Ashmolean Museum, Oxford. There is no record of its previous history.²

I. *Description of the Cippus*

The cippus (Museum number 1933,1946) consists of the upper half of a rectangular limestone block with relief carving upon each of its four sides. The top surface, upon which are the marks of a large flat chisel (about 2.0 cm. wide), is between 28.5 and 29.0 cm. square. The block widens slightly below, and its present lower edge measures from 30.5 to 31.0 cm. in width; its height is about 25.0 cm. At a distance varying from 6.2 to 6.4 cm. from the top of the block is the lower edge of a flat moulding 3.0 to 3.5 cm. wide, projecting about 0.5 cm. Above this is a narrower, shallower moulding, whose width is less than 1.0 cm. The block is hollowed out from beneath to 16.5 cm. from the present lower edge. The walls vary from 3.0 to 5.0 cm. in thickness, and, whereas the inner vertical surfaces are smooth, the inner horizontal surface has the rough marks of a punch. The preservation of the lower half of the block is inferior to that of the upper, and at each corner, just above the lower edge of the cippus, there is the slanting cut of a saw for a few centimetres into the stone.³

On each of the four sides are carved three dancers, altogether five women and seven men. The background has been cut to a depth of about 0.4 cm., and the chiselling on the bodies is often only 0.1 cm. deep. The heads are in profile, and the upper half of the body is frontal; the lower half in at least four cases is twisted sideways. All the figures are clad in a *chiton* and an *himation*, the women being distinguished from the men by the arrangement of the *himation*, a headdress, the curls of the hair, and disc-earrings. There is no indication of the breasts, and the men are beardless.

The side on which the central figure looks to the right will be distinguished as side A, and the others, from left to right, as sides B, C, and D.

The central figure on side A is a man flanked by two women, who face him; on each of the other sides a woman is flanked by two men. The usual stance is for

¹ The writer would like to acknowledge the helpful criticism of Sir John Beazley, Professor B. Ashmole, Mr. J. B. Ward Perkins and Mr. M. R. E. Gough, all of whom were kind enough to read this paper in manuscript: his thanks are also due to Mr. John Boardman, who drew his attention to the cippus and suggested several useful lines of enquiry.

² The most comprehensive work on cippi is

E. Paribeni, 'I Rilievi Chiusini Arcaici,' *Studi Etruschi*, xii, 1938, pp. 57–139, and xiii, 1939, pp. 179–202. In the first part he catalogues 173 cippi, of which the Oxford cippus is not one; in the second he discusses them generally.

³ Cf. the discussion of cippus D 16 in the *Catalogue of Sculpture in the Department of Greek and Roman Antiquities of the British Museum*, vol. I, part 2.

the central figure to hold one hand across the body, one hand away from the body, while the lateral figures hold one arm up, the other either across the body or extended behind it. On side D the man on the left carries in his right hand a palm-leaf which extends diagonally in a slight curve to the lower edge of the moulding. Side C is more complicated: the figure on the right holds in his left hand the double pipe of a musician, while the figure on the left passes his left arm behind the woman's forearm, and in the palm of his hand he grasps her chin with finely carved fingers.⁴ He is perhaps touching her right elbow with his right hand, but the surface of the stone has been damaged, and the extent of the fingers is uncertain.

The heads of the dancers do not differ much in treatment. In most cases the line of the nose and the line of the forehead are one. The chin is prominent, and so are the cheek-bones. The full eye is seen: it is narrow and simply cut, and the hollow beneath the brows is slight. The lips smile gently. The line of the jaw is variously delineated: sometimes it is barely indicated, at others it is cut too deeply. The hair both of the men and of the women is short, but on the former the hair is combed straight forward over the forehead and temples, whereas on the latter a row of curls appears below the fillet. In two instances the disc-earrings are decorated with an inscribed circle.

The background of the cippus is cut, not to permit a three-dimensional treatment of the figures, but to emphasise their outline. The dancers are not rounded into the background: the vertical cut is left and either catches the light or casts a shadow. The art is not one of moulding but of differentiating flat areas by fine lines. The cutting behind the fillet of the left hand figure on side B is too deep for realism. The drapery has been treated formally, and the wide simple folds have been cut in shallow steps.

A groove cut around certain parts of the relief increases the definition of the outline. The incision seems to represent in stone what the 'nimbus' represents in the red-figure painting of vases, and indeed the function of the cut background too is similar to that of the black which surrounds reserved areas in this type of painting.⁵

II. *Assessment of the Cippus*

Before discussing the vase-painting and tomb-painting in which this relief finds its closest parallels, two important reservations must be made.

(i) The chronology of Etruscan art is imprecise. The circumstances of discovery are in most cases unrecorded, and insufficient archaeological research has been done in Etruria on the dating of objects related by context. We are dealing here with an art which is funerary, and funerary art tends to be conservative or archaistic. At the same time it is a derivative art, and 'a derivative art is apt to proceed by fits and starts.'⁶ Consequently we must not expect to find the steady

⁴ Cf. the similar courting gesture often found in Greek vase-painting.

⁵ A good example of this outline in stone is the stele of a young athlete, found on Nisyros and now in the Ottoman Museum at Istanbul. Another

interesting comparison is the Treasury of the Siphnians at Delphi, where a thin red line was used to distinguish blue helmets from a blue background.

⁶ J. D. Beazley, *Etruscan Vase-Painting*, Oxford, 1947, p. vi.

development which characterises Greek kouroi or Attic grave-reliefs. Greek yardsticks are naturally introduced as a gauge for Etruscan art, but they should be used with caution. A further complication is that internally Etruria did not develop at a uniform rate. The cities of the Federation were separated by political, commercial, and (not least) topographical factors. Thus, while Chiusi, for instance, neared her zenith, the coastal cities were already in decline.

(ii) The Etruscans were at their best with bronze and terra-cotta (both plastic techniques), with mural painting, and, on a small scale, with gold-work and jewellery. They were never *sculptors*, in the restricted sense of the term. They did not use marble, and the soft stone which they did carve lends itself both in relief and in the round to a free and almost plastic treatment. The few successful stone statues which survive show this clearly; two good examples are the 'Centaur' and the 'Boy riding a Sea-Monster,' both in the Villa Giulia at Rome. Similarly relief carving on stone was practised in a linear manner until the late fifth century, and in any appreciation of the cippus this affinity with painting rather than with sculpture must be stressed.

Three groups of vases may briefly be considered in turn. To these approximate dates can be assigned, and a number of resemblances to features observed on the cippus suggests that it is a work of the last years of the sixth century or the first years of the fifth.

Rather earlier than the cippus is the large and very fine series of black-figure hydriai, known as the Caeretan hydriai.⁷ Of the thirty which exist twenty-eight were found at Caere and two at Vulci. They were produced during the third quarter of the sixth century (probably the products of a single workshop) and, although representing an earlier and more robust style, afford several points of comparison with the cippus. One hydria in the Louvre depicts a stag-hunt, in which the rider of a horse wears an *himation* quite as simple as those shown on the cippus, with broad, flat folds drawn in parallel lines.⁸ On another example in the Louvre a woman holds the horses for two departing warriors: her head is in profile, and the jaw, eye, and disc-earring recall the cippus.⁹

The so-called 'Pontic' vases were found at Vulci and cover a rather longer period.¹⁰ In Munich there is an amphora on which processional figures resemble the dancers on the cippus: the reserved stylisation and the turning of the second figure to address the woman who follows him are particularly close to the relief-carving.¹¹ An amphora in Paris shows the same treatment of long, slit eyes and the tendency for high cheek-bones which characterise the cippus.¹² Further points of comparison are the simple rendering of the drapery and the similarly stylised movement.

Yet this painting too is more primitive than the carving of the cippus, and it is with a third group of vases, which were produced in the last quarter of the sixth and

⁷ M. Santangelo, 'Idrie Ceretane' in *Enciclopedia dell'Arte Antica*, Rome, 1959.

⁸ C.V.A. Louvre, IX, Group III FA, E 697, pls. 1 and 3.

⁹ *Ibid.*, E 699, pls. 5 and 6.

¹⁰ P. Ducati, *Pontische Vasen*, 1932. Also Beazley, *op. cit.*, p. 12.

¹¹ Ducati, *op. cit.*, pl. 1.

¹² *Ibid.*, pl. 20.

early years of the fifth centuries, and of which the chief representative is the 'Micali' painter, that the cippus is most closely allied. An amphora in the British Museum depicting Etruscan sport is a work of the 'Micali' painter; the bodies are not so frontal as those on the cippus, but the women's heads are similar and so are their hands.¹³ Around the neck of the amphora three women dance in procession to the left, their right hands raised.

The painted Etruscan tombs confirm this dating. Closest in style are the Tomb of the Triclinium and the Tomb of the Leopards, both at Tarquinia. In the latter the flute-player, the man in front of him, and, particularly, the lyre-player may all be associated with the figures of the cippus. The fillets, the shape of the head and eyes, the small mouths, the folds of the drapery, and the outlines are all very similar. The greater freedom of movement in the painting is natural when we remember the different tasks with which the artist in each case was faced. The emphasis in these paintings is on the springing line, and there is no modelling of the body such as occurs in later work. 'Le détail est volontairement éliminé au profit du contour'.¹⁴

The majority of cippi can safely be attributed to Chiusi.¹⁵ In its fullest form a cippus consisted of three parts, a base, an upper block set above the base, and a finial knob in the shape of an onion (a stylised representation of the phallic form). The most complete example of a complex cippus is in the Museo Barracco at Rome, and from it can be obtained an idea of the original appearance of the Oxford fragment, which consists of the upper half of the upper block.¹⁶ The repertory of subjects found on cippi includes *prothesis* scenes, processions and dances.

The carving of two sides of the Barracco cippus is shallow and exact, and the figures are exquisitely drawn; on the other sides the carving is by an inferior hand which cut deeper and portrayed clumsier figures. All the figures however reveal a simple, sensitive line. In contrast with this a cippus in Munich has more depth and more complication.¹⁷ While the faces are still seen in profile, some of the bodies attempt a three-quarter view; the line has lost its vitality and the scene is spoilt by an ungainly effusion of naturalistic detail. A third example is in Berlin, and, although here too there is overcrowding and unsatisfactory composition, the technique is cruder and there is more respect for the limitations of the stone.¹⁸ In the *prothesis* scene the whole of the shrouded figure is visible, whereas in its counterpart on the Munich cippus a woman comes forward to stand in front of it, imparting a sense of greater depth. A comparison too of the horses shows a feeling for line in the Berlin cippus which is absent from the other. In the Barracco *prothesis* a woman stands in front of the shrouded figure, but here the design is far more careful than on the Munich example. It may be concluded that the Barracco cippus, which is the closest of the three to the style of the Oxford cippus, is earlier than the Munich and later than the Berlin cippus.

In Perugia there is a cippus on each side of which are three dancers, restrained, simple, and very close in style to those of the Oxford cippus.¹⁹ Some of the heads

¹³ B 64 (Pourtales Collection). For these vases, see Beazley, *op. cit.*, pp. 12-15.

¹⁴ R. Bloch, *L'Art et la Civilisation Etrusques*, Paris, 1955, p. 78.

¹⁵ Paribeni, *op. cit.*, xii, p. 57.

¹⁶ G. Q. Giglioli, *L'Arte Etrusca*, 1935, pl. CXLIII-IV.

¹⁷ Paribeni, *op. cit.*, no. 78, pl. XXII.

¹⁸ *Ibid.*, no. 77, pl. XXI.

¹⁹ *Ibid.*, no. 31, pl. XIV.

are nearly identical : the headdress, fillets, hair, ears, shape of face and treatment of drapery present such striking parallels that it is probable that one artist carved both works. A detail of technique confirms this supposition : on each side of the two cippi there is a fine vertical line half way along the cornice, presumably a guide to the sculptor in drafting the work. These lines have not been observed by the writer on any other cippi.

Finally another cippus in Berlin is close to these two in many details, but its style is more elegant and sophisticated.²⁰ It is akin to the Oxford and Perugia pair, but must be distinguished from them as representing a more advanced stage of formal development.

R. M. HARRISON

²⁰ A. Rumpf, *Staatliche Museen zu Berlin : Katalog der Etruskischen Skulpturen*, Berlin, 1928, pls. 21 and 22.

TWO CIPPI NEAR RIETI

(Plate III)

SHORTLY before reaching Rieti, coming from Rome, on the left (west) side of the Via Salaria, between km. 83.9 and 84, can be seen two round-topped cippi of ordinary tufo bearing nothing but an inscription, identical in both cases and datable by the form of the lettering to *c.* 50 B.C. (pl. III). The text runs :

C. GAVIVS. C. F. Q.
CARPVS

The left-hand cippus, more or less battered, has lost the initial C; the right-hand one, on which the inscribed zone is covered with white paint (not plaster) has a scar before CARPVS, which might suggest that something has been lost (*e.g.* [eu] CARPVS); but this is excluded by its companion, which is well preserved at this particular point.

I think that the two cippi were erected in order to delimitate a funerary area, which might be buried behind them; the slope of the mountain is here rather steep and consists of friable stone.

The inscription is, to the best of my knowledge, unpublished. It is not to be found in *CIL* IX, nor is the person mentioned in P.-W., *s.v.* Gavius. Ashby's paper in *PBSR*, iii, p. 7 ff. stops shortly before the bivio di Poggio San Lorenzo (km. 61.9), and it is not recorded either by Persichetti (*Röm. Mitt.*, xxiv, 1909, pp. 215-216) or by Martinori (*Via Salaria*, 1931, p. 83). It is probable that the pieces, although they do not appear in the indexes of the *Fasti Archaeologici*, were uncovered during some recent work for enlarging the road.

The text offers no difficulty whatsoever. Q stands for *Q[uirina tribu]*, not *Q[uinti nepos]*, because both cippi are complete here. For Carpus as a *cognomen*, cf. *CIL*, Indexes of vols. ii and Suppl.; iii and Suppl.; viii; ix; x; xi; xii; xiii; xiv and xiv, Suppl. Ost.

C. C. VAN ESSEN

THE ROUND TEMPLE IN THE FORUM BOARIUM*

(Plates IV–XI)

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I. The Problem

THE name and date of the little round temple in the Forum Boarium at Rome (popularly known as the 'Temple of Vesta') are long-standing problems of Roman topography. Its identification is still quite uncertain.¹ On the chronology, however, general opinion seems to have hardened and, for reasons which are discussed below, most scholars appear now to believe that the building is Augustan, rejecting the attractive theory of Altmann and Delbrueck that it was erected some time in the later second century B.C.² The present article is not concerned at all with the problem of identification, nor does it attempt the full and detailed study of the design and construction without which a definitive solution of the problem of dating is clearly impossible. Its purpose is twofold: to draw attention to some significant features of the architectural design and decoration, and to illustrate and discuss some surviving fragments which can be shown to belong to the lost entablature, but which seem hitherto to have escaped attention.³

The foundations of the temple were first exposed by Valadier in the early nineteenth century, in the course of restoration work undertaken to free the building of later accretions and to consolidate the ancient remains.⁴ Valadier's drawings

* For help and advice in preparing this article the writers are indebted to Professor A. W. Lawrence; Mr. Ernest Nash; Miss Alison Frantz; Professor C. Pietrangeli; Professor Magi and Miss Hermine Speier, in connection with the fragments now in the Vatican; Mrs. Phyllis Lehmann, for her generous permission to make use of the as yet unpublished results of her researches on the Hieron at Samothrace; and to Mr. and Mrs. Michael Ballance for much practical help both on the ground and in preparing the illustrations.

¹ The most convenient summaries of the problem may be found in Platner-Ashby, *A Topographical Dictionary of Ancient Rome*, s.v. *Portunium*, and in G. Lugli, *Roma Antica, il centro monumentale*, Rome, 1946, pp. 579–582.

² W. Altmann, *Die italischen Rundbauten*, Berlin, 1906, pp. 22–30; R. Delbrueck, *Hellenistische*

Bauten in Latium, ii, Strassburg, 1912, pp. 43 and 58. For a recent expression on this view, see H. Plommer, *Ancient and Classical Architecture* (Simpson's History of Architectural Development, vol. i) London, 1956, p. 264; D. S. Robertson, *Handbook of Greek and Roman Architecture*, 2nd ed., Cambridge, 1945, p. 211, who nevertheless inclines to the view that nothing visible is earlier than Augustus.

³ It seems to have been generally thought (e.g. Robertson, *loc. cit.*) that the entablature was completely lost.

⁴ G. Valadier, *Raccolta della più insigni fabbriche di Roma antica*, vol. iii, 'Tempio detto di Vesta in Roma,' Rome, 1813. For the appearance of the building before Valadier, see *Restaurations des pensionnaires*, etc., Paris, 1879, *Le Temple de Vesta*, pl. II.

show that the foundations of the peristyle are built independently of the cella foundations, the outer face of the former being stepped outwards to ancient ground level, whereas the inner face, despite irregularly projecting blocks, is vertical. Further excavations undertaken by Deangelis at the end of the nineteenth century revealed the form of the cella foundations, already partly explored in a treasure hunt carried out in 1827.⁵ These consist of a ring wall and two interior walls crossing at right angles to form four deep *favissae*. The foundations of both peristyle and cella are built throughout of tufa, with the exception of a series of slabs of travertine that are inset beneath the marble stylobate to help to carry the load of the peristyle columns. According to Tenney Frank,⁶ the tufa used is that from the quarries of Grotta Oscura, a variety that was much used in the early Republican period, but very little after the time of Sulla.

Are these foundations of the same date as the present marble building? Many scholars have doubted it. The first to do so were Koldewey and Puchstein, who thought that they could distinguish the remains of two earlier temples in tufa and peperino and imagined an earlier peristyle of 28 wooden columns of the Italo-Doric order.⁷ Deangelis thought that the cella foundations were designed for a building slightly smaller than that which now stands upon them. Tenney Frank distinguished the 'podium' (what exactly in the present context he meant by this term is not clear) from the temple itself, the former 'old,' the latter Augustan. Recently Caraffa has claimed to detect the profile of an earlier base moulding below the travertine;⁸ but, however convincing this feature may look at present, it does not appear in Valadier's apparently accurate drawing of the steps and, in view of the considerable wear and weathering of the stone that can be seen to have taken place at this point, very little trust can be placed in it. In opposition to the views of these scholars, Valadier (by implication), Petersen,⁹ Altmann and Delbrueck all believed the whole foundation to be of one build and designed to carry the present temple; and, after some initial hesitation, they are now followed by Lugli,¹⁰ who, assuming an Augustan date for the whole complex, cites this as the only Augustan example of the extensive use of Grotta Oscura tufa. Miss Blake, on the other hand, believes that, whereas the temple itself is Augustan, the materials of the foundations clearly indicate an earlier date, perhaps in the second century B.C.¹¹

It will be evident even from the foregoing very rapid summary that there have in the past been considerable differences of opinion about the relative dates of the temple and its foundations. In so far as the belief that these are of different dates has arisen from seeming discrepancies of materials or of workmanship, it may for the present be disregarded, since the purpose of the present article is the re-evaluation of this very factor. The structure must be allowed to speak for itself; and here,

⁵ G. Deangelis, *Ufficio tecnico per la conservazione dei monumenti di Roma e provincia: Relazione dei lavori eseguiti dall'ufficio nel quadriennio 1899-1902*, Rome, 1903, pp. 106-107, cf. R. Lanciani, *Ruins and Excavations of Ancient Rome*, London, 1897, p. 518, fig. 201. It should be noted that some details of the published section are demonstrably inaccurate; e.g. the relation of the steps to the stylobate.

⁶ *Roman Buildings of the Republic* (Papers and Monographs of the American Academy in Rome, iii, 1924), p. 136.

⁷ *Röm. Mitt.*, vii, 1892, pp. 108-109.

⁸ G. Caraffa, *Il tempio di Vesta nel Foro Boario*, Rome, 1948, p. 7, fig. 2.

⁹ *Röm. Mitt.*, loc. cit.

¹⁰ G. Lugli, *La tecnica edilizia romana*, Rome, 1957, pp. 256-257; cf. id. *Roma Antica: il centro monumentale*, Rome, 1946, p. 579 ('facendo presupporre una fase anteriore').

¹¹ M. E. Blake, *Ancient Roman Construction in Italy from the Prehistoric Period to Augustus*, Washington, 1947, pp. 132, 175.

although much of the evidence can no longer be examined at first hand, it is hard to avoid the conclusion that the evidence for an earlier building, or buildings, is altogether too slender for the weight that has been laid upon it. It is true that the visible foundations are of rather rough construction; but they are perfectly consistent with having been designed from the first for the marble building that now stands on them. As now exposed, the outer foundations, which are almost all laid as headers (pl. VI, *b*), have all the appearance of foundations for steps of marble or travertine, rather than actual steps; and a stepped podium in tufa, in place of the orthodox vertical podium, would in any case be a very strange feature in any Italic temple of the Republican period. On the evidence of structure the onus of proof still rests with those who claim that the temple and its foundations are of different dates; and since the material of which the latter is composed would normally be taken to imply a date not later than the time of Sulla, one is led to enquire whether the Augustan date favoured by so many writers for the marble superstructure may not in fact be mistaken. It is this enquiry that forms the subject of the present article.

D. E. S.
J. B. W. P.

II. *The Structure of the Temple*

The surviving elements of the ancient superstructure are the cella, preserved in places to about two-thirds of its original height, and the greater part of the columns and capitals of the peristyle. Of the entablature nothing has survived in place. The cella wall is built of a carefully contrived mixture of Pentelic marble and travertine, cut in squared blocks and held by metal cramps.¹² It consists essentially of a tall socle with simple cornice and base mouldings and, above the socle, a wall of which the structural pattern is deliberately emphasised by means of a fine decorative drafting along the lines both of the vertical and the horizontal joints. The columns, the Attic bases of which are set directly on the stylobate, are of Pentelic marble. They were originally 28 in number, and each is built up of 5–9 fluted drums of varying height, the base and lower part of the bottom drum being carved in one piece. The Corinthian capitals, also presumably of Pentelic marble, at any rate in the original structure,¹³ are cut from two separate blocks of equal height.

The construction of the cella wall can best be understood by a glance at fig. 1. The outer face of the socle, 2.97 m. high from the marble pavement of the pteron to the top of the cornice, is built up of five unequal courses, of which the first and fifth (ht. 0.45 and 0.43 respectively) include not only the base moulding and cornice but also part of the intervening wall-surface, the rest of it being contained in two tall courses (0.96 and 0.88) and one intermediate, short course (0.24). The internal structure of the wall may be deduced by comparing the materials and construction

¹² Altmann, *op. cit.*, p. 27. All that can now be seen are a longitudinal iron cramp, set in lead, between two of the external socle blocks just to the left of the door; and about half way round the right-hand inner face, what appears to be the head of a similar cramp, set at right-angles to the wall.

As is frequent in this sort of masonry, the internal jointing is very rough.

¹³ Without close inspection it is impossible to say whether the replacements (see below, pp. 22–23) are of Italian marble as they may well be.

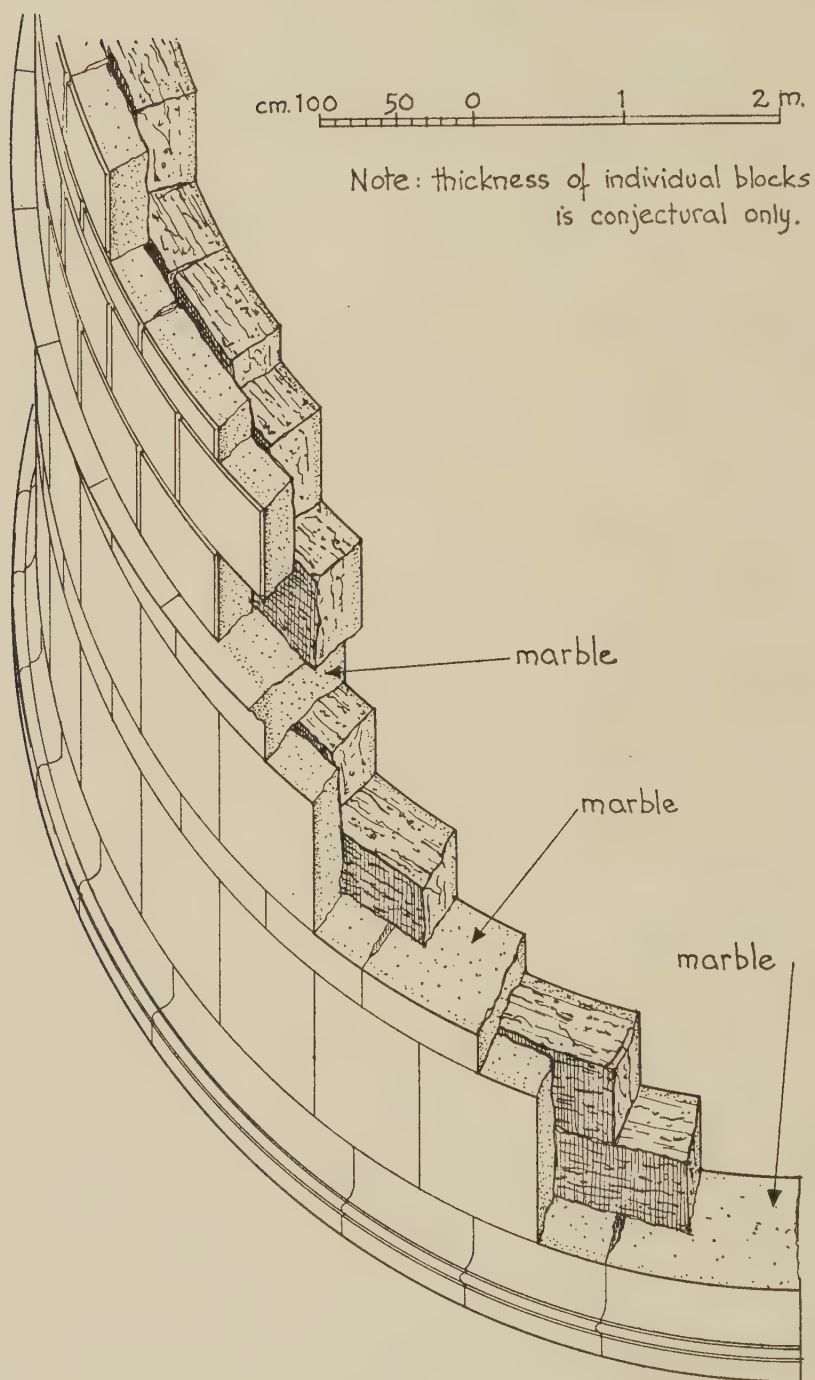


FIG. 1. CONSTRUCTION OF CELLA WALL

of the outer and the inner faces. The horizontal jointing of the latter corresponds exactly with that of the outer face, except that for each of the two tall courses there is here a pair of courses of normal size. Evidently the first, third and fifth courses of the outer face run right through the thickness of the wall; the remaining two courses are relatively shallow slabs, laid on edge and backed by pairs of blocks of normal dimensions; and it is these backing blocks that are of travertine, all the rest being of marble.¹⁴ The mouldings of the plinth are plain, without carved ornament, and the wall-surface is dressed smooth, with neat, unobtrusive joints. In contrast to the boldly accented masonry of the wall-face above, the builders were clearly concerned to emphasise the formal unity of the socle (pl. IV).

Above the cornice the character of the masonry is quite different, the emphasis here being all on the pattern formed by the jointing between the individual blocks. These are of uniform length (86 cm.), and they are laid in a regular pattern of taller and shorter courses, every third course being less than half the height of the previous two (24 cm., as against 59–60 cm.). There seem originally to have been seventeen courses in all, of which five are still complete, and four more and fragments of a fifth can be seen round the rear half of the cella, towards the north and west. A comparison of the inner and outer faces shows that in this case not even the 'short' courses are in fact headers, as they appear to be; they consist, like all the rest, of an inner and an outer ring of blocks, laid back to back. On the inner face the blocks, which are of travertine, are laid as they came, with no regular bond. The outer face, on the other hand, is of marble, laid to a regular bond, the vertical joints of each course falling exactly half-way between those of the courses immediately above and below, and so corresponding exactly in alternate courses.

This appearance of regularity is accentuated by the treatment of the individual blocks. To throw the pattern of the masonry into relief and to emphasise the contrast between it and the smooth surfaces of the socle below, the edges of each individual block for a distance of some 25 mm. on either side of the joint have been dressed back some 6–8 mm., leaving the main surface of the block in shallow relief, separated from its neighbours in every direction by a shallow groove about 5 cm. wide. The result superficially resembles the finest Roman '*bugnato*,' or bossed masonry. There is, however, an important distinction. However carefully dressed, the raised surfaces of *bugnato* are essentially a by-product of the jointing. This is sometimes done with a broad chisel held parallel to the finished wall face ('drafted'); but in Roman masonry of the Republican period it is far more commonly beveled, and in either case it served the very practical purpose of allowing the mason to lay a horizontal or vertical string-line along blocks of which the exposed faces were still quite rough when laid, and were only dressed back to their final form when they were already in position.¹⁵ In the present instance the joints are neither beveled nor, in the ordinary, functional sense of the word, drafted; instead they are cut straight back, separating the masonry surface into two smooth, contrasting planes. They were almost certainly cut after the main wall-surface had already been laid

¹⁴ In the present state of the inner face it is not at all easy to distinguish the travertine from the marble blocks, and it may be that there is some admixture of marble even in the travertine courses, particularly on the side facing the door. The broad

distinction is, however, quite clear.

¹⁵ So, quite rightly, G. Lugli, *La Tecnica Edilizia Romana*, Rome, 1957, p. 207. His use of the term 'external anathyrosis' (*anathyrosis esterna*) is, however, confusing and to be avoided.

and dressed back to substantially its finished form, and they serve a purely decorative purpose. Both functionally and decoratively this is something quite distinct from the ordinary *bugnato*, whether beveled or drafted. To distinguish it from the type of drafting which, even when decorative in its finished intention, is achieved by refining an originally functional drafting, we may perhaps refer to it, at any rate in its Roman context, as 'channeled' or 'countersunk' drafting (see further Appendix, p. 32).

The inner face of the cella, socle and wall, marble and travertine alike, is very roughly dressed, with only such light, chiseled drafting as was needed to secure a good joint. There are the cut-back and heavily restored remains of a cornice at the same height as that of the outer face, and there may also have been a base-moulding; in the present condition of the monument it is impossible to be certain. The whole surface must have been faced with plaster, and it is tempting to believe that this may have repeated the general scheme of the masonry of the exterior, or something very like it.^{15a}

This is a distinctive, not to say a highly mannered, type of masonry, and one to which Rome itself does not appear to offer any very close parallels. As several scholars have remarked, it would fit far more naturally into the history of late Hellenistic architecture, representing a refined classicism comparable to that of the second-century Greek architect Hermogenes.¹⁶ The alternative, followed (at any rate implicitly) by most recent scholars, is to regard it as an example of Augustan classicism, comparable with the temple of Mars Ultor in the Forum of Augustus. In either case it is based on an alien tradition, and before trying to resolve the dilemma it is necessary first to say something about this tradition in its native, Hellenistic context.

What precisely are the distinctive elements of the masonry used in the Round Temple? They are, firstly, the formal distinction between the upper part of the wall and the socle; secondly, the use of a 'tall-and-short' convention; and thirdly, the employment of a decorative, channeled drafting. Fourthly and lastly there is the fact that, contrary to normal Roman usage, the whole of the visible superstructure, walls and all, was built almost entirely of marble, in this case of marble imported from the Pentelic quarries of Attica.

Wall and socle. The distinction between wall and socle, here a purely decorative convention, has a long history of practical usage behind it.¹⁷ The combination of a waterproof stone footing and a superstructure of such materials as timber, clay or mud brick is one that is found in the architecture of all places and periods, classical Greece included; and like so much else that was originally functional, it has left its mark upon the purely ornamental conventions of later Greek building practice. The primitive, functional version is not always easy to document, since the superstructure, being of perishable materials, has usually perished and can only be inferred from what has survived. A well-known example which has left clear traces is the temple of Hera at Olympia (c. 600 B.C. or shortly afterwards)¹⁸ in which the socle of the cella walls consists of four narrow courses of masonry faced with massive orthostates, whereas the superstructure, found collapsed (thereby, incidentally,

^{15a} See also Appendix, p. 31.

¹⁶ So, most recently, H. Plommer, *op. cit.* (n.2), p. 264.

¹⁷ Max Vetter, *Der Sockel*, Strassburg, 1910, pp. 3-9.

¹⁸ W. B. Dinsmoor, *The Architecture of Ancient Greece*, 3rd ed., 1950, p. 55. For the date, see A. W. Lawrence, *Greek Architecture*, 1957, p. 115 and n. 1 (p. 302).

preserving the famous Hermes of Praxiteles) was of mud brick. The particular form in which the socle appears in the Round Temple developed from a version that still had a practical purpose to serve in a building such as the palace of the Persian governor at Vouni, in Cyprus, built soon after 498 and destroyed at the beginning of the fourth century B.C.;¹⁹ or, as late as the end of the fourth century, the earliest buildings of the Hellenistic Agora at Dura.²⁰ In both these cases the superstructure is of mud brick and the form of the socle, as seen in section, is that of a pair of orthostate slabs with a flat capping-slab; at Dura, architecturally by far the more sophisticated of the two sites, there is often also a horizontal seating-course between the orthostates and the footings. This is a characteristically Greek method of construction. We find nothing of the sort, for example, in contemporary Etruria, where the socle of the sixth-century mud-brick wall of Roselle is built of rough blocks of local limestone, and those of the fifth-century houses of Marzabotto and Veii of large river-pebbles and roughly squared tufa blocks respectively.

'Tall-and-short' masonry. The typical 'tall-and-short' architecture of late classical and Hellenistic Greek practice is really little more than an extension to the whole wall of the building technique already employed in this type of socle. At Vouni we can actually see the emergence of the one from the other. Over most of the building the walls were of mud brick on a stone socle; but several of the rooms²¹ were more elaborate, being built entirely of stone, and in these the socle construction was simply carried upwards in a regular alternation of orthostate and capping courses. Between the orthostates there was a core of rubble, and at intervals in the orthostate courses there were slabs set at right-angles to the line of the wall, boxing the core into a number of separate compartments. In the later, more refined versions of this style of masonry, which were more concerned with the visual effects to be achieved by the alternation of uniform horizontal courses of different heights, these transverse orthostates were usually omitted. But they are not uncommon to a much later date in the simpler, less pretentious structures. At Pergamon, for example, we find them in the second century B.C. in the outer walls of the Altar Precinct,²² and even later at Assos, where they are a regular feature of the masonry of all periods.²³ At Dura, the shortage of good building-stone precludes any corresponding upward development, but the treatment of the socle is, as one would expect, far more sophisticated. Not only is the rubble core laid in a gypsum mortar, but the individual slabs are carefully cut to uniform dimensions, and, as already remarked, between the orthostates and the actual footing there is often a horizontal, slightly projecting seating course. Except for the absence of moulded ornament on the seating and capping courses, this is already in essence the decorative socle of Hellenistic and Roman classical usage.

The 'tall-and-short' style of masonry was ideally suited to districts where the local stone quarried easily into slabs. It was also economical both in materials and in labour, since a very considerable proportion of the total bulk might consist of rubble and the inner faces of the orthostates could be left quite rough. As a result, it had a

¹⁹ Å. Åkerström in *The Swedish Cyprus Expedition*, iii, 1937, pp. 111–290.

²⁰ F. E. Brown in *Excavations at Dura Europos*, Ninth Season 1935–1936, Part I: the Agora and

Bazaar, pp. 3–37, especially pp. 3–27.

²¹ E.g. Room 93, Åkerström, *op. cit.*, figs. 61, 62.

²² *Altertümer von Pergamon*, iii, 1, pl. V; cf. pl. VII.

²³ *Investigations at Assos*, 1902–1921, *passim*.

considerable vogue in Hellenistic Asia Minor, occurring in a wide variety of related forms, and surviving locally well into the Roman period. It could be used quite simply, without any socle or base-moulding (the Market Gate at Priene),²⁴ or else with a plain, Doric socle, distinguished only by the greater height of the orthostate course, or courses (Miletus, Bouleuterion);²⁵ the capping course might project (Priene, North Stoa);²⁶ and there might be either a plain projecting plinth (Priene, Temple of Athena Polias)²⁷ or a decorated base-moulding (Magnesia, Temple of Zeus Soter; Miletus, propylon to the Bouleuterion).²⁸ This does not by any means exhaust the possible combinations. In the Bouleuterion at Miletus, for example, the orthostates of the outer face are coupled internally with two courses of ordinary size, a variant that is repeated in even more elaborate form in the Bouleuterion at Assos,²⁹ where the floors inside and outside are at different levels, and where the outer face displays a 'tall-and-short' convention with a high socle but no mouldings, whereas the inner face has all the appearance of ordinary coursed masonry over a socle with a projecting capping course. Clearly there was a very wide range of simple variant forms, the precise details of which are unimportant in the present context.

Fine channeled, or countersunk, drafting. By comparison with the tall-and-short convention, channeled drafting, which was laborious to cut and served no practical purpose, was something of a rarity in the Hellenistic world, where it was evidently regarded as a luxury, to be used only where time and expense were matters of small importance. We meet it as early as the end of the fourth or beginning of the third century at Sardis, in the great temple of Artemis, a building which in this, as in so many other respects, may well reflect the vanished glories of its even greater neighbour and namesake at Ephesus.³⁰ Here, above a tall socle consisting of plinth, base-moulding and two very finely jointed orthostate courses, the wall-face consists of courses of headers with a wide 3–4 cm. decorative draft around each block. The height of the individual courses is not absolutely uniform, but the absence of any capping to the socle (at a point where some sort of formal articulation would seem to be called for, and where later architects would certainly have placed one) makes it almost certain that there was no deliberate pattern of taller and shorter courses; nor were the blocks of uniform length. The inner face of the cella was smooth, and the coursing corresponds roughly, though not exactly, with that of the outer face. The core was of rubble. Here, at Sardis, one still seems to detect a certain hesitancy, *e.g.* in the absence of any formal masonry pattern, and it was perhaps still of fairly recent introduction. No trace of any such hesitancy remains in Hermogenes's temple of Artemis at Magnesia.³¹ Plinth, decorated base-moulding, orthostate, meander-decorated capping course, wall of fine, regularly bonded, channel-drafted masonry: here already are all the elements that we meet again later in the temples of Rome and Augustus at Ankara and of Mars Ultor in Rome, and in a rather more

²⁴ Th. Wiegand and H. Schrader, *Priene*, Berlin, 1904, fig. 200.

²⁵ H. Knackfuss, *Das Rathaus von Milet*, pl. II; temp. Antiochus Epiphanes (*ibid.*, pp. 95–9).

²⁶ *Priene*, p. 201 (not shown in the illustration, but the text is quite explicit; c. 150 B.C.

²⁷ *Ibid.*, p. 95.

²⁸ *Magnesia-am-Maeander*, pp. 145–6; Knackfuss, *op. cit.*, p. 63 ff., fig. 65.

²⁹ *Investigations at Assos*, p. 55.

³⁰ H. C. Butler, *Sardis*, ii, 1, pp. 29–33.

³¹ *Magnesia-am-Maeander*, pp. 72–83, fig. 66; or, as early as the end of the fourth century, on the Hieron at Samothrace (*v. Appendix*).

elaborate form, in the mid-second century temple at Aezani.³² Hermogenes was certainly not the originator of the fine drafted masonry convention; but his adoption of it was undoubtedly an important factor in establishing an effective and influential tradition for its use.

This much at any rate seems to be clear. What is far less clear is the exact relationship of this type of fine masonry to the decorative stuccowork of which the Pompeian 'First Style' is the most familiar local version. This type of stuccowork, with its moulded blocks of variegated or plain-coloured masonry, was in widespread use within the Hellenistic world as a substitute for the far more costly marble paneling which, so far as we know, first makes its appearance in the palace architecture of the Hellenistic rulers.³³ That there was a close formal relationship between this masonry-style stuccowork (and no doubt the equivalent work in marble) and the actual masonry of contemporary usage, there is no room for doubt. Not only do we find such distinctive features as the plain socle with a meander-ornamented capping course repeated identically in both,³⁴ but there are several surviving instances of typical decorative schemes carried out partly in masonry and partly in stucco. At Magnesia, for example, the courtyard of the Prytaneion³⁵ had a tall masonry socle consisting of plinth, two orthostate courses, and a projecting, cornice-moulded, capping course, and above this a facing of red and yellow stucco imitating fine, regularly bonded, drafted masonry. At Priene, the *ephebeion* of the Lower Gymnasium had an even more striking, internal scheme, with a very tall socle, or plinth, of 'tall-and-short' marble masonry and, above it, an engaged order of Corinthian half-columns, all the detail of which, including the wall-surface against which it stood, was carried out in stucco—a scheme which, as the excavators note is very closely repeated, in stucco only, in House XXIII of the same site.³⁶ A similar relationship can be observed at Athens between the painted, masonry-style stuccowork from a house destroyed in 86 B.C. and the internal scheme of the roughly contemporary Tower of the Winds, which had a wide band of stuccowork (now destroyed) between the cornice of the marble socle and the marble console cornice that divides the second and third internal registers of the octagonal tower.³⁷ This last example, in particular, offers a suggestive parallel to the Round Temple, where the diversity of materials and rather coarse finish of some of the travertine blocks, taken in conjunction with a socle-height internal cornice, make it seem very likely indeed that the interior of the cella was finished in stucco.

Here, then, in the Hellenistic world we have clear and unequivocal evidence of a close relationship between the masonry-style stuccowork and the actual masonry of contemporary building practice. That the former is generally an imitation of the latter is a reasonable enough assumption; it is normally the major monuments that establish the canons of contemporary style. It would, however, be very unwise to assume that the influence was all one-sided. In particular, one may ask whether the initial adoption of the fine decorative drafting in stone by the architects of

³² Mars Ultor: see below. Ankara: D. Krencker and M. Schede, *Der Tempel in Ankara*, Berlin, 1936, pls. 19, 23; Aezani: Ph. Le Bas, *Voyage en Grèce et en Asie Mineure*, Paris, 1888: *Architecture*, pls. 23–26.

³³ Vitr. II, 8, 10; Pliny, *HN*, xxxvi. 47.

³⁴ E.g. Magnesia, the Artemision, in masonry;

Delos, House of the Trident (*Mon. Piot*, xiv, 1907, p. 104, fig. 39).

³⁵ *Magnesia-am-Maeander*, p. 138, fig. 150.

³⁶ *Ephebeion*, see Priene, p. 268, fig. 273; House XXIII, room A, *ibid.*, pp. 314–316, fig. 356.

³⁷ F. Wirth, *Ath. Mitt.* lvi, 1931, 33–58.

Hellenistic Asia Minor may not perhaps owe a good deal to the influence of stucco-work. For all its superficial resemblance to functional drafting, this elaborately countersunk, decorative channeling has no real counterpart in the ordinary practice of workaday masonry, whereas the stuccoworker clearly found it as easy to handle as it was effective. The excavators of Delos did in fact believe that they could demonstrate a development from the simple scored joints of the earliest decorative schemes in stucco (*e.g.* House of Dionysus, House of Kerdon)³⁸ to the three-dimensional channeling of the fully developed masonry style (*e.g.* House of the Trident).³⁹ In default of a clear-cut independent chronology, one is bound to accept the practical application of such a purely typological scheme with some reserve. It is, however, both consistent and logical; and the recent discovery at Morgantina in central Sicily of houses decorated with mosaics and painted, masonry-style stucco with channeled joints, dating from the second half of the third century B.C.,⁴⁰ greatly increases the plausibility of supposing the style to be already widely current in the Aegean and Asia Minor at the beginning of the third century, or even in the latter part of the fourth. When one recalls, further, that stucco was undoubtedly in widespread use also for the exteriors of buildings, where it has all too little chance of survival, but where a masonry style would have been a very natural development,⁴¹ it seems not at all unlikely that it did play an important part in securing the initial adoption of this particular architectural convention. The alternative is to believe that it was developed directly from functional drafting in masonry, the decorative possibilities of which we do occasionally find exploited in Attica as early as the fifth century,⁴² and again on a rather more extensive scale, in the third quarter of the fourth century.⁴³ The basically functional character of this Attic drafting is shown by the fact that in no single instance is the upper edge drafted, but the result is certainly decorative in intention, and it would have been a perfectly feasible step from this to the convention that we find used at Sardis. In either case, whatever the original inspiration, it is quite clear that both masons and stuccoworkers played an active part in the development that followed; and the subsequent use of this drafted convention by Hermogenes and others is as much a reflection of the popularity of existing stuccowork practice as it was itself a powerful influence in shaping later work both in stone and in stucco.

* * * *

What does all this tell us about the circular temple in the Forum Boarium?

The use of the decorative socle is in itself far too commonplace a feature to be very informative. Used as a podium it already had a long history in central

³⁸ *Mon. Piot*, xiv, 1908, figs. 29–30. This would seem to be confirmed by the evidence from Olynthus, destroyed in 348 B.C. (*Olynthus*, xii, p. 139 and n. 96).

³⁹ *Ibid.*, fig. 39.

⁴⁰ *AJA*, lxiv, 1960, p. 132, the House of Ganymede (c. 250–211 B.C.).

⁴¹ *E.g.* at Assos, where the excavators note the specific evidence for exterior stuccowork on the North Stoa (*Investigations at Assos*, p. 34). The situation is repeated in later antiquity, *e.g.* on the Baths of Caracalla and on the façade of the Diocletianic Curia, both of which have preserved traces of a facing of masonry-style stuccowork.

⁴² North wall of the Acropolis, c. 465 (W. Wrede, *Attische Mauern*, Athens, 1933, pl. 32; R. L. Scranton, *Greek Walls*, Harvard Univ. Press, 1941, pp. 129, 179, no. D6.1); Propylaea, foundations of the Pinakothek, late fifth century (Scranton, p. 179, no. D6.2); Eleusis, Periclean peribolos (Wrede, pls. 37–39; Scranton, p. 129, no. D6.11; F. Noack, *Eleusis*, Berlin, 1927, pls. 40, d, 41, a, 42, a, c. In the first-named only the lower edge is drafted; in the other two, all except the upper edge).

⁴³ *E.g.* Theatre of Dionysus, Asklepieion, Kerameikos (Sacred Gate and Dipylon), Peiraeus (Wrede, pls. 52, 55, 50, 54 and 69, respectively; Scranton, p. 179, nos. D6. 4, 5, 6, 13).

Italian architecture. As a feature of independent wall-construction it was almost certainly a far more recent introduction, and a more detailed knowledge than we at present possess of the sources of the so-called Second Pompeian Style of wall-painting and of its equivalents in real architecture may well throw light on the circumstances of its adoption. It is certainly not a development from First Style decorative work, since it is precisely in its use of the socle that Pompeii seems to diverge most clearly from Aegean practice.⁴⁴ For the present we can only remark that, like so much else in late Republican architecture, it is more or less directly derived from Hellenistic practice.

The tall-and-short convention is, by contrast, very far from commonplace in such a context. Roman *opus quadratum* was essentially an architecture of blocks rather than slabs; and although in Asia Minor the tall-and-short convention did come to be used very much as a decorative variant of ordinary isodomic ashlar work,⁴⁵ the fashion does not seem to have spread to Rome. So far as the writer is aware, there is not another single instance of its use in the masonry of Rome or central Italy, and only one instance of its use in stucco—on the adjoining Ionic temple (the so-called 'Temple of Fortuna Virilis').⁴⁶ In the case of this convention we have strong presumptive evidence of direct derivation from Hellenistic Greece or Asia Minor. The somewhat elaborate manner of its use, with a tall composite socle, suggests a fairly late date within the Hellenistic series; but it would not have excited attention at any date in or after the second century B.C.

The outstanding example of the use of decorative, channeled drafting in Roman architecture is the temple of Mars Ultor in the Forum Augustum, dedicated in 2 B.C. There are many signs of Greek influence in the decoration of the Forum,⁴⁷ and the masonry of the cella walls conforms so closely to the canons established by Hermogenes that there can be no doubt whatever of the source from which it was derived. If one compares it with the roughly contemporary temple of Rome and Augustus at Ankara, one finds just the same elaborate socle, the same meander pattern on the capping course, the same regularly bonded, channel-drafted masonry in the upper wall.⁴⁸ The principal difference is that here every fourth course only is of solid marble, the rest consisting merely of thin slabs of marble laid over a core of travertine—a characteristically Roman economy in the use of materials, to be clearly distinguished from the backing of blocks of solid marble with blocks of less expensive stone, a usage for which there are plenty of parallels in classical architecture of all periods.

The temple of Rome and Augustus in the forum at Terracina⁴⁹ is in this respect presumably a direct copy from that of Mars Ultor; and the survival of channel-drafted veneer slabs from the temple of Divus Julius in the Forum Romanum⁵⁰ and from the Trajanic temple of Venus Genetrix suggests that there may well have

⁴⁴ M. Bulard, *Mon. Piot*, xiv, 1908, pp. 163–179. In the Pompeian Style I the socle has moved up the wall and rests upon a plain dado. In Style II the socle resumes its strictly architectural role.

⁴⁵ E.g. in the Artemision at Magnesia, where the excavators found a certain number of drafted blocks that were 23 cm. high, instead of the usual 43–58 cm. (*Magnesia-am-Maeander*, p. 74); and now in the Hieron at Samothrace (see Appendix, pp. 31–32).

⁴⁶ This feature appears to have escaped notice; it can be seen on the south flank of the cella just behind the porch.

⁴⁷ E.g. the caryatids and much of the detail of the mouldings of the flanking porticoes.

⁴⁸ *JRS*, xxxviii, 1948, pp. 66–67, fig. 10.

⁴⁹ *Forma Italiae: Anxur-Terracina*, iii, fig. 22 (Tiberian; Lugli, *op. cit.* pl. LVI, 2).

⁵⁰ So Lugli, *op. cit.*, p. 213.

been other copies in the capital. Another group of monuments on which decorative drafting of this sort is sometimes used is that of the late Republican or early Imperial travertine-faced mausolea, notable examples being the tomb of Caecilia Metella on the Via Appia and that of the Plautii near Tivoli. Once again we may suspect the influence of Hellenistic Greece, although in this case there is nothing to suggest the immediate source. The Romans had far less feeling than the Greeks for the qualities of fine masonry, used as such. They were normally content to rely upon the intrinsic character of the material itself, or else, as often as not, to hide it behind a decorative screen of stucco or of marble veneer. There are, of course, many exceptions; the great enclosure wall of the Forum Augustum itself, for example, or the rusticated travertine of the Porta Maggiore and the temple of Divus Claudius. But even here, the emphasis tends rather to be on the texture and quality of the stone surfaces than on the actual pattern of blocks and courses. It is hardly surprising, therefore, that channeled drafting never came into general use. It was, and it remained, an alien convention.

Analysis of the masonry of the circular temple in the Forum Boarium shows quite clearly that it is an intruder upon the Roman scene. If there were other buildings like it, they have vanished, leaving no trace. At least one of the features that it incorporates, the tall-and-short convention, is unique within the Roman series; another, the use of channeled drafting, is occasionally found in Augustan Rome, but in a form which plainly indicates independent derivation from Hellenistic Greece or Asia Minor.

Can one be more precise? The parallels cited all come from the western coast of Asia Minor, the historical centre of experiment and development of the traditional Greek architectural forms during the Hellenistic age. It is true that sporadic examples of the tall-and-short convention are to be seen in mainland Greece from the fifth century onwards, two of the most striking of the later examples, the Stoa of Attalos and the monument on the Acropolis subsequently used for a statue of Agrippa,⁵¹ being situated in Athens and both directly attributable to Pergamene influence. Decorative drafting, on the other hand, does not seem to be found in Attica after the fourth century, and even then not in its fully developed, channeled form.⁵² One cannot altogether exclude Athens as a possible intermediary; but the effective source of the masonry of this temple is undoubtedly Asia Minor.

The date is less easily defined. The only work in Rome that is at all closely comparable is that of the temple of Mars Ultor; and that, though related, represents a different branch of the parent tradition. Augustan architecture is so remarkably varied that one hesitates to exclude a building merely because there are no others like it. Fortunately in the case of the Round Temple there are two good reasons for regarding it as pre-Augustan. One is that, once the practice of using a thin veneer of marble over a core of less expensive materials had become established, it was only for reasons of quite exceptional display that architects felt the need to depart from so sensible and economical a device. The use by Augustus of solid marble masonry for the temple of Apollo on the Palatine was already a matter of literary comment, and there is nothing whatever to suggest that any similar reasons

⁵¹ Stoa of Attalos: Wrede, *op. cit.* (n. 42), pl. 61.

⁵² Later examples, such as the Arch of Hadrian and the façade of the Hadrianic Library, clearly belong to the *koine* of Roman Imperial usage.

were operative in the case of this modest little temple. Another reason for a pre-Augustan date is that the marble is Pentelic. The Luna quarries were already functioning in the 'thirties, and after that date for over a century there is not a single surviving building in Rome that was built entirely, or even largely, of imported white marble.

How long before the time of Augustus the temple was built it is impossible to determine from the masonry alone. There is nothing about it that would have called for comment in Asia Minor at any date after the middle of the second century B.C., or even earlier;^{52a} and once one accepts that it is a product of alien taste and craftsmanship, there is no inherent reason why it should not fall at any point within this wide range. It might be thought that the extensive use of marble throughout argues a later rather than earlier date. But although in private use marble was still a rare luxury and a target for the censorious as late as the first half of the first century B.C.,⁵³ there does not seem to be any good reason for doubting the explicit statement of Velleius (1, II, 5) that it had been used half a century before by Q. Caecilius Metellus Macedonicus in the construction of the Porticus Metelli, built soon after 146 B.C. on the site of what later became the Porticus Octaviae: 'hic idem primus omnium Romae aedem ex marmore in iis monumentis molitus <huius> vel magnificentiae vel luxuriae princeps fuit.'⁵⁴ The fact that Pliny, our principal authority, was ignorant of, or failed to recall, this particular example is not altogether surprising. The Porticus Metelli itself had been swept away long before, and the connotations of *luxuria* would have been quite enough to bias the surviving literary tradition in favour of references to the early and scandalous examples of its use in domestic architecture at the expense of the socially less vulnerable occasions of its use in religious or public buildings. Although there is perhaps a certain balance of probability in favour of the period after about 80 B.C., when the use of foreign marbles began to be really widespread,⁵⁵ it would be very hard, solely on the evidence of the materials of which the Round Temple is built, to exclude any date for its construction after the middle of the second century B.C. It is in fact just the sort of building that any wealthy Roman of philhellenic cultural tendencies might be expected to have built at any date within the last century of the Roman Republic.

To conclude this section, attention may be called to one or two small details of the standing architecture of the Round Temple which argue no less strongly in favour of a pre-Augustan date. The carving of the capitals in two parts is unfortunately not in itself a useful criterion of early date, since, although common in Republican times, it remained in regular use for large capitals throughout the Augustan period.⁵⁶ The curiously abrupt, flattened ends of the fluting on the column-shafts

^{52a} The Hieron at Samothrace offers a close parallel to the masonry as early as the end of the fourth century B.C.; see Appendix, pp. 31-32.

⁵³ Pliny, *HN*, xvii, 6 (L. Licinius Crassus, before 91 B.C.); xxvi, 49 (M. Lepidus, 78 B.C.). The literary evidence for the early use of marble is conveniently summarised by Miss Blake, *Ancient Roman Construction in Italy*, Washington, 1947, p. 51.

⁵⁴ For the Porticus Metelli, M. J. Boyd, *PBSR*, xxi, 1953, pp. 150-159; he is surely right in referring the word *aedem* in the passage in Velleius to the

porticus itself rather than to either of the two temples that stood within it.

⁵⁵ Pliny, *HN*, xxxvi, 45 (Sulla's expropriation for the temple of Jupiter Capitolinus of columns destined for the Olympieion at Athens); *ibid.*, 49, 50 (*marmor Luculleum*, so called after L. Lucullus, c. 74 B.C.).

⁵⁶ Among the best-known Republican examples are those of Temple B in the Largo Argentina; *cf.*, outside Italy, the Olympieion at Athens. This feature will be discussed shortly in greater detail by the present authors in connection with the temple of Castor in the Forum Romanum.

(pl. VI, *a*) are, on the other hand, unquestionably an early feature, without parallel in Augustan architecture.⁵⁷ Another indication of early date is the use of column-bases without rectangular plinths. Bases of this sort are common in the late Republican architecture of Rome and Italy, whereas the plinth seems to have become a normal feature of Roman and Ionic Corinthian by very early Augustan times, and is almost universal in subsequent Imperial architecture.⁵⁸ Yet another detail of the construction, the carving of the column-base in one piece with the lowest drum of the column-shaft, is typical of Republican practice, but seems to disappear completely from the architecture of the early Augustan period.⁵⁹ None of these features is, perhaps, in itself absolutely conclusive; but, taken together, they do constitute a substantial confirmation of the pre-Augustan date of the Round Temple.

J. B. W. P.

III. *The Architectural Detail*

Several scholars have studied the detail of the Round Temple capitals in an attempt to date the building more precisely. The first to do so was Altmann, who argued for a date in the second century B.C. His argument was, however, hopelessly vitiated by the fact that his 'nächste Analogie,' which he thought to be a capital from the Olympieion at Athens, was in fact (as illustrated) a capital from the Stoa of Hadrian, as drawn by Stuart and Revett;⁶⁰ moreover, the capital of the Round Temple which he chose to illustrate was one which has very little in common with the real Olympieion capitals. As presented, Altmann's thesis was clearly hopelessly confused. It did, however, contain an element of truth, since there are certain very clear analogies between the leaf carving of the real Olympieion capitals⁶¹ and that of one group of Round Temple capitals; and Delbrueck,⁶² who noted these analogies, was accordingly also led to propose a second-century date for the temple, tentatively identifying it with the *aedes Herculis Aemiliana*, built about 130 B.C. Weigand⁶³ also compared the Round Temple capitals with those of the Olympieion and of the Bouleuterion at Miletus, but observed that the capital illustrated by Altmann was Augustan. Implicit in this last observation, although Weigand does not seem to have followed it up,⁶⁴ is the conclusion that the capitals of the Temple are of two different dates.

In the first detailed study of the Round Temple capitals, Miss M. Gütschow,⁶⁵ following Weigand, divided them into two types (*a* and *b*) on the basis of the leaf carving, the leaves of Type *a* being 'spitz-gezackt,' and those of Type *b* 'rund-gezackt.' On the authority of Weigand, not apparently from her own observation,

⁵⁷ Cf. the two Republican temples at Tivoli, Delbrueck, *op. cit.* (n. 2), pl. IX.

⁵⁸ Plinthless bases: e.g. Palestrina (Fasolo and Gullini, pls. XVIII and XXI). Early uses of the plinth: the Rectangular Temple ('Fortuna Virilis') in the Forum Boarium, c. 40 B.C. (*Röm. Mitt.* xxi, 1906, pl. X); the temple of Saturn, early 20's B.C.

⁵⁹ E.g. Largo Argentina, Temple B; the two Republican temples at Tivoli; Palestrina; etc.

⁶⁰ Altmann, *op. cit.* (n. 2), p. 27, fig. 8, taken from J. Stuart and N. Revett, *Antiquities of Athens*, vol. I, London, 1762, chap. V, pl. VIII.

⁶¹ Well illustrated in A. Schober, *Der Fries des Hekateions von Lagina*, Vienna, 1933, figs. 10 and 11; and a good detail in H. Möbius, *Die Ornamente der griechischen Grabstelen*, Berlin, 1929, pl. 33b.

⁶² Delbrueck, *op. cit.* (n. 2), p. 43.

⁶³ *A.M.*, xxxix, 1914, p. 26.

⁶⁴ E. Weigand, 'Die Stellung Dalmatiens in der römischen Reichskunst,' in *Strena Buliciana*, Zagreb, 1924, p. 82.

⁶⁵ 'Untersuchungen zum korinthischen Kapitell 1,' *J.D.A.I.*, xxxvi, 1921, pp. 66-71, fig. 6, and Beilage iii, nos. 3 and 4.

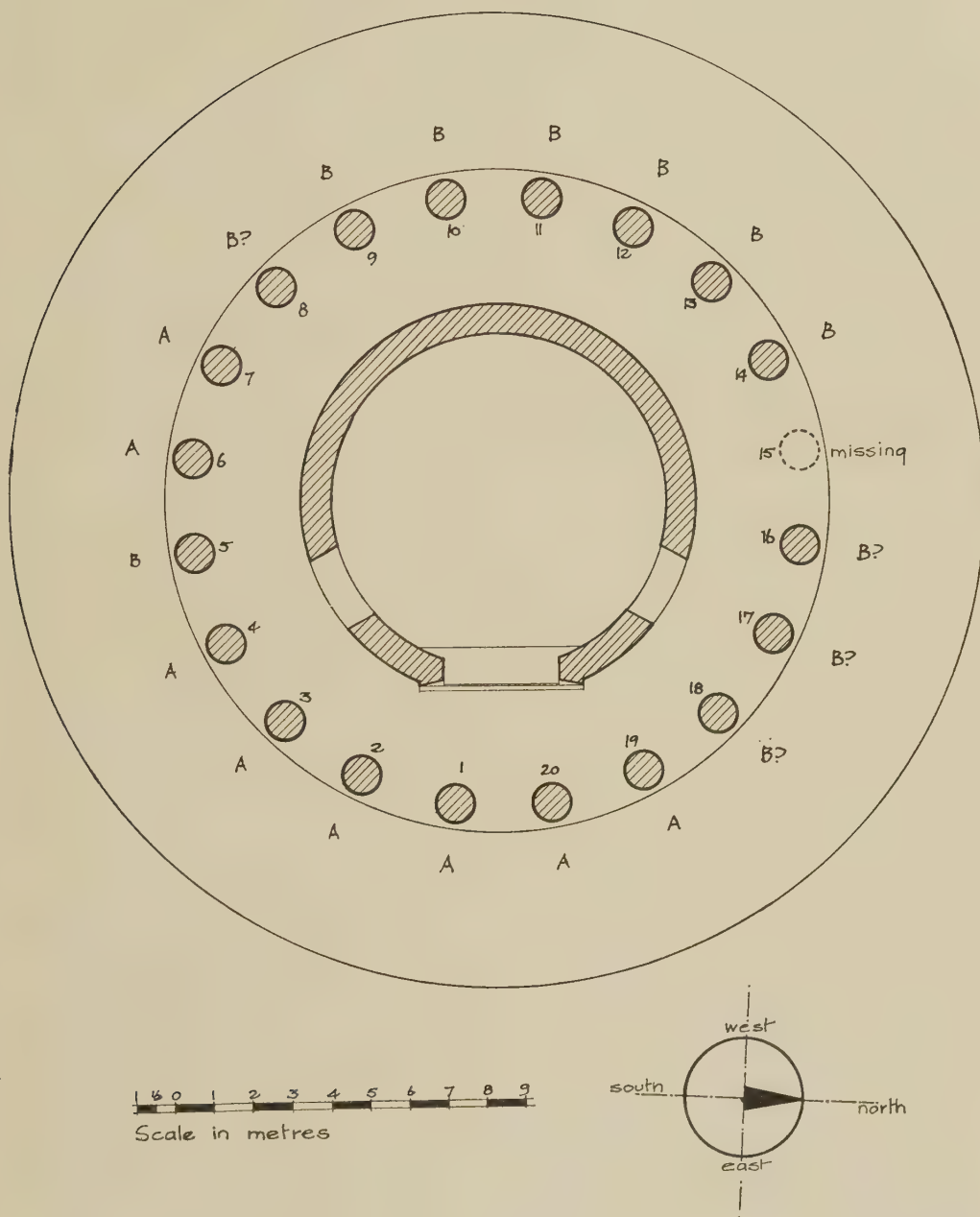


FIG. 2. SCHEMATIC PLAN, SHOWING LOCATION OF CAPITALS

she distinguished eight of Type *a* and eleven of Type *b*, Type *a* being illustrated in her article by a drawing in D'Espouy⁶⁶ and a cast in Berlin, and Type *b* by the capital reproduced by Altmann. The positions of the two types of capital are shown here on a plan of the building (fig. 2).⁶⁷ It will be noticed that the capitals of Type *a* make up a run, broken by one of Type *b*, on the eastern side of the temple.

Miss Gütschow argued that all the capitals belonged to the original marble building, and she explained the two groups as the work of different craftsmen. She dated the whole building to the Augustan period, mainly on the basis of the Type *b* capitals. The stylistic differences between the two types are, however, great (pl. VII); and recently Caraffa,⁶⁸ struck by those differences and by considerable differences also in dimensions, has put forward the view that both groups are *spolia*. But the fact that, despite differences in detail and execution, all of them have the same basic design and construction, both of which are unusual among Roman capitals, seems to rule out this possibility. It is surely incredible that twenty capitals of roughly suitable dimensions, all carved in two parts and all having the curious and very rare cauliculus and leaf above the central acanthus, could have been got together at any one time from different buildings.⁶⁹

It is, on the other hand, equally hard to believe, with Miss Gütschow, that two groups of capitals so very different in style as those of Type *a* and Type *b* can really have been contemporary with each other and Augustan in date. Several details of the Type *b* capitals argue very strongly for a date in the post-Augustan period. One such detail is the way in which, on the acanthus leaves, the upper point of one lobe is made to overlap the lower point of the lobe above so as to leave a narrow, almost vertical, wedge-shaped hollow. This is completely different from the normal Augustan arrangement of the adjacent lobes, whereby the upper lobe overlaps the one below it (contrast the capitals of the temples of Apollo Sosianus, Mars Ultor, and Castor),⁷⁰ and would have been quite impossible in the earlier Augustan period, when there is no overlapping at all.⁷¹ The arrangement found on the Type *b* capitals of the Round Temple seems first to have become common in the Julio-Claudian period, and by Flavian times it was almost universal. The flat midrib of the acanthus leaf, the curious drill-holes to make the lobe-divisions in the leaf over the central cauliculus, and the rough carving of the cauliculi,⁷² also suggest a post-Augustan date and the detail of the helices and volutes is normal for the late Augustan or Julio-Claudian period.

On the other hand, the detail of the Type *a* capitals is by no means as convincingly Augustan as Miss Gütschow has argued. The closest analogies for the leaf carving, especially the broad divisions of the lobes, the widely spread points, and the rounded

⁶⁶ H. D'Espouy, *Fragments antiques exécutés par les Prix de Rome d'Architecture*, pl. 60 (drawing of a type *a* capital).

⁶⁷ The identification of the two types of capital in fig. 2 is based on examination with binoculars from below; a closer examination may well show that capital no. 8 is neither pure Type *a* nor Type *b*, but a mixture of both.

⁶⁸ *Op. cit.* (n. 8), p. 11.

⁶⁹ The leaf rising from a cauliculus in the centre of each face is, in fact, found only on the Round Temple capitals (see p. 23 and note 77).

⁷⁰ For the Temple of Apollo capitals, see *Bull. Com.*, lxviii, 1940, p. 22, fig. 13; for Mars Ultor, *Capitolium*, iv, 1930, p. 167; for Castor, *R.M.* 61, 1954, pl. 84, 2.

⁷¹ For these earlier capitals belonging to the period 40–20 B.C., see H. Kähler, *Die römischen Kapitelle des Rheingebietes*, Berlin, 1939, Beilage 2.

⁷² I do not know a single example of unfluted cauliculi, as on some of the Type *b* capitals, in the Augustan period or earlier.

fleshy ribs of the leaves, are with capitals from buildings of the late Republican period in Italy (e.g. the Round Temple in the Largo Argentina⁷³) and with late Hellenistic capitals in Greece and Asia Minor.⁷⁴ A travertine capital in the Antiquario Comunale (pl. XI, *a*) is illustrated here to show how closely the leaves of Type *a* capitals compare with these late Republican examples in tufa and travertine.⁷⁵ There are no exact parallels among Roman capitals for the cauliculus and leaf motif above the central acanthus leaf on each face, but the very curious double cauliculi found on the capitals of the Round Temple in the Largo Argentina may be said to have something in common with it,⁷⁶ and the acanthus leaf without the cauliculus is a common feature of late Hellenistic capitals in Asia Minor⁷⁷ (e.g. the capitals of the Hekateion at Lagina) and of late Republican capitals in Rome and Italy.⁷⁸ The small helices of the Type *a* capitals compare closely with late Hellenistic Corinthian capitals, and the cauliculi with very narrow fluting are a Hellenistic rather than an Imperial feature. Delbrueck's comparison between the Round Temple capitals and those of the Olympieion at Athens remains a very valid one when applied to capitals of Type *a*. On the other hand, none of the Type *a* capitals have anything in common with dated examples either of the period of the Second Triumvirate or of Augustan times.⁷⁹

It is hard to believe that capitals differing so greatly one from another could have been found together on a building dating from the Augustan period, when the standard of uniformity in craftsmanship and design reached a very high level. The differences in dimensions would seem to be as strong an argument against this possibility as the differences in style. If it is agreed that all the existing capitals were, in fact, made for the Round Temple, the only possible explanation of stylistic differences so wide as to suggest that the two sets were made at widely different periods seems to be that the Type *a* capitals, stylistically the earlier set, belong to the original building, while those of Type *b* belong to an extensive later restoration carried out, to judge from their style, some time in the Julio-Claudian period. This conclusion explains the known facts about the capitals and is confirmed to some extent by their position in the building, those of Type *a* forming a single group broken by only one of Type *b* on the eastern side of the Temple. A simple explanation of the facts is that the building was restored after a fire that had badly damaged one side of it.

Miss Gütschow's arguments were accepted by Robertson,⁸⁰ Fagerlind⁸¹ and others as convincing evidence for the Augustan date of the Temple. If, however,

⁷³ *Bull. Com.*, lxxvi, 1956–58, p. 45 ff. Marchetti-Longhi dates this temple to the late second or very early first century B.C.

⁷⁴ E.g. the capitals of the Bouleuterion at Miletus (H. Knackfuss, *Das Rathaus von Milet* (Milet, vol. I, 2), pls. XI, XII) and those of the Hekateion at Lagina (A. Schober, *op. cit.* (n. 61), p. 19, figs. 8 and 9).

⁷⁵ For other examples see Kähler, *op. cit.*, p. 6.

⁷⁶ Marchetti-Longhi (*art. cit.*, p. 59) thinks of a Greek prototype for the design of the capitals.

⁷⁷ A capital from the Laodice building at Miletus has a cauliculus but no leaf above the central acanthus (*Anatolia*, ii, 1957, pl. XIV, *a*, illustrating a number of Hellenistic capitals in Asia Minor).

⁷⁸ E.g. capitals at Palestrina (F. Fasolo and G. Gullini, *Il Santuario della Fortuna Primigenia a Palestrina*, Rome, 1953, figs. 260–3).

⁷⁹ One unusual detail of the Round Temple capitals, the pointed angles of the abacus, which is found on the Olympieion capitals, also occurs on a capital now in the National Museum at Athens, which, if it comes from the Odeion of Agrippa, dates from between 20 and 10 B.C. (*Hesperia*, xix, 1950, pp. 31–141); in other respects it has nothing in common with the Round Temple capitals.

⁸⁰ Robertson, *op. cit.* (n. 2), p. 339.

⁸¹ L. Fagerlind, 'The transformations of the Corinthian capital in Rome,' in *Corolla Archeologica*, 1932, pp. 118–132; assigned to the period 25–15 B.C.

the capitals of Type *b* are later replacements, the problem of the date of the original building turns on the date of Type *a* capitals, whose similarity to the late Republican examples in tufa and travertine cannot be denied. Although it is doubtful whether the problem of date can be settled on the study of the capitals alone, at least until a detailed examination has been made to discover, for example, whether those of Type *b* are carved in the same marble as Type *a*, it is quite evident that Miss Gütschow's arguments cannot be taken as convincing.

The surviving fragments of the entablature of the Round Temple have never been discussed in connection with the problem of the date of the building. In his description of the Temple Valadier⁸² published a reconstructed drawing, together with details, of the peristyle coffering. This reconstruction was based on a large fragment, found in his excavations, which, together with other smaller fragments enabled him to reconstruct a complete section. The fragment itself is not illustrated in Valadier's publication, but it appears, half-hidden, in the foreground of a drawing of the Round Temple made by him for the heading of a diploma of the Accademia Romana di Archeologia, dated 5th July, 1816.⁸³ In his detailed account of the building he also illustrated a small fragment of the cornice (Tav. V, fig. V) and two antefixes, one decorated with an eagle above a thunderbolt, the other with a vase and acanthus foliage.

Several of the fragments discovered by Valadier are still to be seen in the area to the west of the temple, and the large section of the coffering and the eagle antefix are now in the Vatican Museum. In 1954 the coffering lay in two pieces in the Cortile delle Corazze, together with other architectural fragments; but it has since been recomposed and set up in a niche near the Magazzino Innocenzo VIII (Magazzino Galli). A number of drawings of the coffering have since appeared, all based upon Valadier,⁸⁴ but no photographs either of the Vatican fragment or of the smaller pieces found at the same time have ever been published. Some of these fragments are illustrated here in pl. VIII.

Of the two small cornice-fragments, the attribution of one (pl. IX, *a*) to the temple may be considered as certain on grounds of style, especially the detail of the ovolo. On the second fragment (pl. IX, *b*) the ovolo is very different, and it is possible that, like the Type *b* capitals, it too is a later replacement. Valadier doubted whether the two antefixes, or tile-ends, also derived from the building, and the eagle antefix (pl. IX, *c*) seems to be much later in style than the rest of the Temple ornament. If the antefixes do come from the temple architecture they must also belong, like the capitals of Type *b*, to some later restoration and not to the original building. The marble of the eagle antefix is certainly Italian. That of the second cornice fragment (pl. IX, *b*) is difficult to judge because of the condition of the fragment.

The Vatican coffer fragment has a maximum width of 107 cm. between two worked edges and a surviving length of 160 cm. The greater part of one wider (*i.e.* outer) panel and its framing mouldings is preserved, together with the broad

⁸² *Op. cit.* (n. 4), pl. V. Contrast the fanciful restoration of J. A. Coussin (1802) in *Restaurations par les Pensionnaires*, etc., Paris, 1879.

⁸³ F. Magi in *Rend. Pont. Acc. Arch.*, xvi, 1940, p. 122, fig. 3.

⁸⁴ *E.g.* L. Canina, *Gli Edifici di Roma Antica*, ii, Rome, 1848, pl. LXIV, 3.

fillet dividing it from the narrower (inner) panel. In the left hand edge of the slab may be seen the cutting for a cramp joining two adjacent sections of the coffering. The slab is 31 cm. thick; the marble is Pentelic. Another fragment of the coffering now lying in the area by the temple preserves parts of two adjacent inner panels, showing that the slabs were not all cut to the same width, and suggesting that the final detail of the mouldings must have been worked when the blocks were already in position (pl. VIII, *b*). A third fragment, also in the area, preserves a small part of the ornament and framing moulding of one of the narrower panels; from all these Valadier was able to reconstruct the complete coffer shown in his pl. V.

The recess of each coffer panel is decorated with a rosette composed of four acanthus leaves pointing towards the angles, alternating with four plain, pointed leaves. The central boss, drawn by Valadier as consisting of four large petals framing a rosette, has now disappeared and may have been his own restoration. In the narrower and longer recesses of the inner panels the rosette left a space at either end, which was filled by smaller rosettes of pointed petals linked by a wavy tendril. The recess of each panel is framed by a broad fillet, round which runs a decorated ovolo; outside this is a second fillet, framed by a decorated cyma reversa profile. The division between two adjacent coffers consists of a broad raised fillet with a deep groove down the centre line.

The origin of this type of coffering with recessed panels framed by mouldings is ultimately classical, and it was adopted with comparatively little change by Roman architects. In the earliest surviving stone ceilings of this general type, such as that of the Erechtheum, the mouldings are painted;⁸⁵ but profiles with carved decoration are found in the fourth century, the best known example being the coffering of the Tholos at Epidauros,⁸⁶ and subsequently throughout the Hellenistic period. In Augustan Rome similar coffers with carved decoration appear in the peristyle of the Temple of Mars Ultor and on the cornice of the same building (pl. XI, *b*).⁸⁷ This type of coffer was also introduced in Roman architecture to fill the space between the modillions supporting the corona of Corinthian cornices, among the earliest examples being the coffers of the cornice of the lower (?) order from the Basilica Aemilia,⁸⁸ and in the late Augustan and Julio-Claudian period the form becomes standard on the cornices of large marble temples. On the Round Temple coffering the detail of the decoration is, however, quite unlike any known Augustan examples. The central rosette, carved in comparatively flat relief and spreading over the whole surface of the inner recess, contrasts strongly with the smaller, high-relief rosettes of the Mars Ultor coffering. Its closest analogies in architecture are the rosettes carved in the coffering of the Temple at Vesta at Tivoli,⁸⁹ and the fragmentary rosette on a travertine coffer in the Antiquario Comunale, which certainly dates from the late Republican period (pl. X, *b*).⁹⁰ In the latter example the little rosettes

⁸⁵ G. P. Stevens and others, *The Erechtheum*, Harvard, 1927, pl. XXVI (Porch of the Maidens).

⁸⁶ A. Defrasse and H. Lechat, *Epidaure*, Paris, 1895, pp. 95-128.

⁸⁷ D'Espouy, *op. cit.* (n. 66), pl. 9; F. Toebelmann, *Römische Gebäude*, Heidelberg, 1923, pl. 4.

⁸⁸ Toebelmann, *op. cit.*, pl. 3. This entablature belongs to the restoration carried out after the fire of 14 B.C.

⁸⁹ Delbrueck, *op. cit.* (n. 2), ii, pl. XII; D'Espouy, *op. cit.*, pl. 52; *cf.* the rosette carved in one of the coffer panels of a late Republican tomb at Pompeii (*Not. Scav.*, 1943, p. 306, fig. 22 (right)).

⁹⁰ Unpublished; I owe my knowledge of it to Enrico Paribeni. Another comparable piece is a late Republican limestone coffer in the Museum at Aquileia.

at the corners of the panel resemble those on the coffers of the Round Temple.⁹¹ A closely similar rosette is carved on the underside of a marble vase in the Museo Nazionale delle Terme, which probably belongs to the first century B.C.⁹² (pl. XI, c). Both from the form of the leaf rosette and from the detail of the carving of the leaves (which is, incidentally, identical with that of the Type *a* capitals) a pre-Augustan date for the Round Temple coffer is extremely likely.⁹³

The detail of the decorated mouldings also argues for a pre-Augustan date. Both the ovolo (pl. IX, *a*) and the cyma reversa (pl. VIII, *c*) are badly weathered and, the latter especially, rather poorly carved. Reference to Weickert's study of the development of the motif⁹⁴ makes it clear that the Round Temple examples belong to a late phase in its history. The leaves of the basic leaf-and-tongue ornament have been broken into a series of arches of angular outline, within which the raised midrib, dividing at the top, has become the dominating feature. The tongue is very broad, as it usually is in late Hellenistic examples.⁹⁵ The closest parallels for the Round Temple cymatia are to be found in late Hellenistic buildings in Asia Minor. In the fourth century B.C., the form with concave leaf surfaces, as opposed to the convex leaf of Attic examples,⁹⁶ became universally adopted in Asia Minor; early examples are the cymatia from Priene and the Mausoleum.⁹⁷ In the temple of Artemis at Magnesia⁹⁸ the detail is already closer to the Round Temple form; the loop at the top of the arches has become smaller and the tongue wider. Closest of all in the shape of the arches and the tongue are the painted cymatia from second-century houses at Delos;⁹⁹ and on those of the temple of Hekate at Lagina the raised midrib between the arches bends over to touch the loop, as it does in the Round Temple example.¹⁰⁰

The cymation of the Round Temple fits easily into the development of Hellenistic architectural ornament in Asia Minor. If found in that area, it might be given a *terminus post quem* of about 100 B.C., with the reservation that in the absence of dated buildings comparatively little can be said about the subsequent development of the motif.¹⁰¹ There is little doubt that the form of the motif on the Round Temple derives directly from Asia Minor; whether the carving is also the work of Asiatic craftsmen is more difficult to say. The ornament is badly worn, but the original carving seems to have been of indifferent quality. This is not, in itself, against an attribution to Asiatic craftsmen. The decline of craftsmanship in the Greek world of the last two centuries B.C. may be deduced from the architectural detail of such buildings as the Hekateion at Lagina, and the pure pedigree of the Round Temple version suggests carvers trained in eastern Hellenistic centres.¹⁰²

⁹¹ For the same kind of 'horror vacui,' cf. the large rosettes of Etruscan funerary urns, with smaller rosettes dotted in the spaces (e.g., G. Q. Giglioli, *L'Arte Etrusca*, CCCCVIII, 2).

⁹² The alternation of plain and serrated leaves is the commonest form of calyx or rosette in the Hellenistic period as, for example, on the undersides of 'Megarian Bowls' (see F. Courby, *Les vases grecs à reliefs*, Paris, 1922, pp. 367 ff).

⁹³ It is instructive to contrast the rosettes of the coffering on the temple of Saturn (Toebelmann, p. 7) and the Mausoleum of Augustus (*Arch. Anz.*, 1941, cc. 505-6, fig. 68), both dating from the early 20's B.C.

⁹⁴ C. Weickert, *Das lesbische Kymation*, Leipzig, 1913.

⁹⁵ E.g. *ibid.* pl. X, *d*.

⁹⁶ See note 103.

⁹⁷ Weickert, *op. cit.*, pl. V, *f, g, h*.

⁹⁸ *Magnesia-am-Maeander*, p. 74, fig. 64.

⁹⁹ *Monuments Piot*, xiv, 1908, pl. VII, *d, g, i, k*.

¹⁰⁰ Schober, *op. cit.* (n. 61), pl. XVIII.

¹⁰¹ A very similar cymation appears on the S. Gate of the Agora at Ephesus, which is Augustan (*Forschungen in Ephesus*, iii, p. 73, fig. 126); but the accompanying ovolo is very different from the Round Temple examples.

¹⁰² The details of the bases, columns and capitals, on the other hand, seem to be related to the Italic-Hellenistic tradition (see above, pp. 19-20).

An Augustan date for this particular form of cyma reversa ornament in Rome is most unlikely, even though closely similar forms were being carved on buildings of the period in the cities of Asia Minor. It is true that Greek architectural decoration was an important influence on the development of Augustan ornament. Many of the motifs used, for example, in the Forum of Augustus are based ultimately upon Attic prototypes; but they can none the less be clearly distinguished from the originals.¹⁰³ The Round Temple cymation, on the other hand, is a pure Asiatic Hellenistic form which does not seem to occur on any known Augustan building in Rome nor, indeed, on any fragments which might reasonably be assigned to the period.¹⁰⁴ Although many craftsmen from eastern centres must have worked on carved ornament in Augustan Rome, the decorative motifs always have certain recognisably 'Roman' features.¹⁰⁵

The detail of the ovolo, like that of the cyma reversa, preserves the late-classical version of the motif in a purer form than the ovolos of Augustan buildings in Rome. The narrow pointed eggs framed in a thin casing and combined with a long tongue, carved shallow on its upper part, compare very closely with the version carved on the architrave of the Hekateion at Lagina¹⁰⁶ and, although far inferior in quality, are obviously derived from the fine ovolos of the Mausoleum, or the temple of Artemis at Magnesia on the Maeander.¹⁰⁷ This type of ovolo can be readily distinguished from Augustan examples of the motif, where the egg is always broader and the casing is either discontinued round the apex or more rounded in form; the tongue is invariably shorter. Much closer to the Round Temple ovolo is the example on a small travertine cornice from the Temple of Fortuna Primigenia at Palestrina, which also has a decorated cyma reversa having much in common with the Asiatic form of the motif;¹⁰⁸ but the only example in Rome which combines all the features of the Round Temple ovolo occurs on a limestone pilaster capital of Greek design now in the Museo Nuovo of the Conservatori Palace. This capital cannot be dated with any precision, but it probably belongs to the late second or first century B.C. (pl. X, a).¹⁰⁹

Only two small fragments survive of the little cornice which, on grounds of style, and especially of the detail of the ovolo, must be attributed to the building (pls. IX, b, c). Both fragments preserve part of the sima and the corona, together with the ovolo dividing them. The total surviving height of the larger fragment is 32 cm., and a maximum length of 70 cm. is preserved. The sima is a cyma recta profile

¹⁰³ The version adopted in the Forum of Augustus is based on the fifth-century Attic form, as used on the Erechtheum and on the Asklepion and Tholos at Epidauros (L. T. Shoe, *Profiles of Greek Mouldings*, Cambridge (Mass.), 1936, pls. D, 11, E, 5 and 6). For earlier Augustan forms, *Bull. Com.*, lxviii, 1940, pl. IV.

¹⁰⁴ In this context, it is instructive to compare a small cornice in the Museo Profano Lateranense which is early Augustan. The design of the sima is pure Hellenistic Greek (cf. M. Schede, *Antikes Traufleisten-Ornament*, Strassburg, 1909, pl. IX, 52 and 54), but the detail of the ovolo and cyma reversa is Roman.

¹⁰⁵ Some are developed from purely Italic forms, e.g. the type C cyma reversa (see *PBSR*, xxi, 1953, p. 121, fig. 1) out of the so-called Hieron leaf

(L. T. Shoe, *Profiles of Western Greek Mouldings*, Rome, 1952, p. 20, figs. 5-7).

¹⁰⁶ Schober, *op. cit.*, p. 23, fig. 12.

¹⁰⁷ *Magnesia-am-Maeander*, p. 74, fig. 64.

¹⁰⁸ Fasolo und Gullini, *op. cit.* (n. 78), p. 297, fig. 413.

¹⁰⁹ The capital is unpublished; it was until 1956 in the Tabularium. For the general design, though not exact parallels, cf. the capital from Priene in the British Museum (*Antiquities of Ionia*, iv, pls. XXI and XVIII), two capitals from Magnesia in Istanbul (G. Mendel, *Catalogue des Sculptures Grecques, Romaines et Byzantines*, I, Constantinople, 1912, nos. 194-5) and another from Didyma (T. Wiegand, *Didyma*, i, 1941, no. F 713a, pls. 128-9). For the leaf carving, cf. a stele in Sparta, which Möbius (*op. cit.* (n. 61), p. 18, pl. 70, b) dates to the second century B.C.

approximately 23 cm. high, including the crowning fillet; the corona is plain and slopes sharply back to the ovolo. As has been noted already the detail of the ovolo on one fragment (pl. IX, *a*) is identical with that of the coffers; the ovolo of the second fragment (pl. IX, *b*) seems later in style. The design of the sima ornament is difficult to reconstruct from these very small surviving fragments. To judge from the larger fragment, the decoration seems to have been an anthemion of acanthus scroll with rosettes and bell-shaped flowers as filling ornaments. Scroll ornament of this general type was normally used to decorate the sima of Ionic and Corinthian buildings of the late classical and Hellenistic period in Greece and Asia Minor, and it has been studied in detail by Schede. So little has survived of the sima from the Round Temple that it is impossible to infer the detail of the design, but it may not have been far different from that on a limestone cornice in Bari,¹¹⁰ a South Italian variant on the Hellenistic form. On this fragment may be observed a similar, though not identical bell-shaped flower, a motif popular in different forms as a filling ornament on this type of scroll throughout the Hellenistic world.

Although very little can be said about the ornament of the Round Temple sima, the low relief of the carving together with the form of the bell-flower seems to preclude a date later than the end of the Republic. A fairly close parallel for the Round Temple flower is found on the limestone pilaster-capital in the Museo Nuovo, already cited as a parallel for the ovolo (pl. X, *a*); both have the same long *spadix* and a similar *corolla*.¹¹¹ This simple form, which has long Classical and Hellenistic Greek pedigree,¹¹² is still found on a number of floral scrolls carved in the period 50–40 B.C., among them those on a pair of decorated pilasters in the Lateran Museum,¹¹³ which, to judge from the detail, can be very little later than 50 B.C.; or again the very similar floral scroll-work carved on the base of the seated figure of a nymph, found at Cumae and now in Pozzuoli, on which the scroll-work issues from a calyx of three acanthus leaves that are almost identical with those of the Round Temple coffering. In Augustan times the bell-shaped flower seems to have dropped out in favour of the more ornate forms derived from Pergamene ornament.

Two other details of the surviving cornice fragment connect it with Hellenistic rather than early Imperial architecture. The first is the use of a small decorated ovolo to divide the sima from the corona, a feature that is common in late Hellenistic entablatures¹¹⁴ and survives into the early Augustan period, but is very rare thereafter. The second is the very strong backward slope of the corona, which is a normal feature of late Republican entablatures, but which, though still found on some early Augustan buildings, is very rare after about 20 B.C.¹¹⁵

It is doubtful whether the fragments of the entablature from the Round Temple can, at present, be dated with precision. It is, however, fairly certain that the

¹¹⁰ H. Klumbach, *Tarentiner Grabkunst*, Reutlingen, 1937, p. 50 (no. 300), pl. 34.

¹¹¹ This is not a natural form, though it derives some detail from a number of campanulate flowers of the genus *ipomoea*; the *spadix* is a feature of the *araceae*.

¹¹² The general type of lily flower first appears in late classical times (Möbius, *op. cit.*, pl. 9, *d*) and is common in various forms both in the east and in Italy (e.g. A. Andr  n, *Architectural Terracottas from*

Etrusco-Italic Temples, Lund, 1940, pl. 42, no. 139, from Civita Castellana; and *Arch. Anz.*, 1956, c. 250, fig. 38 (Tarentine).

¹¹³ Unpublished; Sala III, nos. 499 and 501.

¹¹⁴ The detail is discussed in *PBSR*, xxi, 1953, p. 135.

¹¹⁵ This feature survives on early Imperial cornices, e.g. Regia (Toebelmann, pl. I); the latest example known to me is the cornice of the larger order in the Basilica Aemilia (*ibid.*, pl. III).

design of the coffering, the detail of the mouldings and the decoration of the sima are all closely connected with the late Hellenistic architectural tradition, and to judge from the mouldings a date between 100 and 50 B.C. is perhaps the most probable. Unless it is a work completely unrelated to contemporary architectural practice—an assumption for which there is no positive justification—the middle Augustan period, the date usually accepted for the building of the temple, may be excluded; nor is there any evidence to connect it with the period of the Second Triumvirate or the early years of Augustus. Taken together with the fact that, of the two surviving groups of capitals, one (Type *a*) is most closely related to late Republican Corinthian capitals in Italy, while the other (Type *b*) seems to be post-Augustan, the evidence of the entablature leads to the conclusion that we have to do with a building originally erected in the late Republican period and heavily restored some time in the first half of the first century A.D., or a little later.¹¹⁶ Such a restoration might very plausibly be connected with the great fire of Nero's reign, which wrought great havoc in the Forum Boarium, as elsewhere. Only a detailed re-examination of the superstructure and especially of the capitals can throw more light on the supposed restoration; but the evidence of pre-Augustan detail in the carving of the entablature is undeniable.

D. E. S.

IV. *Conclusions*

Apart from the repairs undertaken, perhaps after a fire, about the middle of the first century A.D., the evidence for the surviving remains of the Round Temple being of more than one period proves on examination to be so slender as to justify our regarding them as all belonging to a single building, put up on a single occasion. This building was directly inspired by Hellenistic models and may even have been erected, in whole or part, by Greek workmen. So far from being an Augustan monument, as it is often claimed to be, it cannot have been built after about 40 B.C., and may very well be a good deal earlier, possibly even as early as the second century.

This much appears reasonably certain. Can we be more precise? In the present state of knowledge it is very doubtful whether we can. Our knowledge of the development of late Hellenistic architecture in Greece still depends on far too many monuments that have been studied only summarily and inadequately published; and the recent controversy about the date of the great sanctuary of Fortuna Primigenia at Praeneste reminds us how shaky is the whole fabric of late Republican architectural chronology in Italy too. We lack a secure framework of reference, and until by a combination of scrupulous architectural analysis and careful excavation such a framework has been built up, one can hardly hope to do more than note convincing analogies and balance the resulting possibilities.

In the case of the Round Temple we have three likely lines of enquiry—the structural idiosyncracies of the building and the materials of which it was built; the character of its ornament; and the historical evidence for the activity of Greek architects in late Republican Italy.

¹¹⁶ The reworking on capitals nos 12–14, noted by Caraffa, provides some confirmation of this hypothesis.

Of these, the first has been treated in Section II (see also Appendix), and it tends to suggest an early date within the possible limits. The closest surviving analogy for the very distinctive masonry formula in Greece itself is a building that dates from the late fourth century B.C., whereas the prevailing fashion in this sort of work during the late Hellenistic period seems to be that which was followed by the Augustan architects of the temple of Mars Ultor and of the temple at Ankara, namely that which may conveniently be associated with the name of Hermogenes. Whatever the date of the Round Temple, it was following what must already have been a somewhat conservative model. This *could* happen at any date, if the fancy of the client or his architect so dictated; but it is far more likely to have happened while the parent tradition was still alive and vigorous. As to materials, the use of marble gives a limiting date of *c.* 150 B.C. (p. 19); and the fact that this marble is Pentelic, and not from the Italian quarries of Luna, shows that it is very unlikely indeed to be later than about 40–30 B.C. Within these limits the use of Grotta Oscura tufa in the foundations suggests an earlier rather than a later date, possibly in the second century B.C., and unlikely to be later than Sulla.

The architectural ornament (Section III), while it certainly excludes the period after about 40 B.C., tends on the whole to suggest a date within the first half of the first century B.C., perhaps earlier rather than later within that period. The Type *a* capitals are related to Hellenistic Greek examples which are as early as the second century B.C. (the Olympieion, the Bouleuterion at Miletus, etc.), but the analogies in Italy are with examples that are usually thought to belong to the early years of the first century (*e.g.* the Round Temple in the Largo Argentina). The Hellenistic Greek type of Corinthian capital does not seem to have become popular in Italy until about the time of Sulla; at Praeneste it is still the Italic Hellenistic type that predominates. In terms of the conventional chronology for late Republican architectural development, the capitals would seem therefore to suggest a date somewhere within the first quarter of the first century B.C. As for the ornament of the entablature, comparable details in Asia Minor could be as early as 150 B.C., but again the Italian analogies (*e.g.* the Round Temple at Tivoli) appear to be rather later.

Historically there does not seem to be any reason why this building should not be of any date after the middle of the second century B.C. Greek architects were active in Italy as early as the third quarter of the century; and even if they did not always work to foreign designs—the temple of Jupiter Stator, built by Hermodorus of Salamis¹¹⁷ not long after 146 B.C., was Italic in plan—they were certainly available to any who wished to take advantage of their special skills. In such matters the taste of the patron mattered just as much as that of the artist whom he employed; and this was above all the age of the victorious general, whose dedications *ex manubiis* must have played no small part in reshaping the artistic taste of late Republican Rome. The Round Temple by the Tiber could very well be such a dedication.

With so many unknowns in the equation, it is hard to be precise. On balance, the Round Temple seems most likely to date from the first half of the first century

¹¹⁷ Vit. iii, 2, 5; see F. Castagnoli, *Röm. Mitt.* lxii, 1955, pp. 139–143. It is doubtful whether the rebuilding of this temple was included in the work commissioned by Metellus in 146 B.C. (M. J. Boyd, *PBSR*, xxi, 1953, pp. 152–159); but it

must have followed soon afterwards, since the same Hermodorus was also responsible for the temple of Mars in *circo Flaminio*, built in 138 B.C. for D. Junius Brutus Callaicus (Nepos, ap. Priscian, viii, 17).

B.C.; but, although it can hardly be very much later, a date as much a half a century earlier is by no means incredible. For a more precise chronology we must await the results of more detailed work on the other monuments of late Republican Latium.

D. E. STRONG

J. B. WARD-PERKINS

APPENDIX

THE ROUND TEMPLE AND THE HIERON AT SAMOTHRACE

When the part of this article that deals with the masonry of the Round Temple was already in final draft, I learned from Mrs. Phyllis Lehmann of the extraordinarily close parallel between it and that of the Hieron excavated by Prof. Karl Lehmann and herself at Samothrace. Mrs. Lehmann has not only since read the draft and made a number of valuable comments about the Greek monuments cited therein (of which she has a far more intimate knowledge than I have) but she has most generously allowed me to append the following summary of the relevant part of her findings, in anticipation of her own full report, which will appear as *Samothrace*, vol. 3: *the Hieron*.

With the exception of the porch, which was planned from the beginning but was not in fact added until the second half of the second century B.C., the Hieron is securely dated by its architectural detail and stratigraphic associations to the last quarter of the fourth century B.C. Of the cella walls over 150 blocks survive, including the majority of the corner pilaster blocks; and the peculiar form of the latter in particular, coupled with the dowelling and other features, enables the masonry system to be reconstructed with certainty in all its details. It consisted of a smoothly dressed orthostate course, resting directly on the stereobate and capped by a smooth string course; and, above the string course nine courses of the wall proper, crowned by a Doric frieze and geison. In contrast to the smooth socle, the blocks of the wall-face had drafted margins. They were of uniform length, laid with their vertical joints over the centres of the blocks below; and, just as in the Round Temple, they were laid in a regular alternation of two tall and one short course (Mrs. Lehmann prefers the terms 'high' and 'low'), of which the short courses ran right through the thickness of the wall, whereas the tall courses consisted of blocks of normal dimensions, laid lengthways and backed on the inner face by blocks of *poros*. The inner face was surfaced with stucco. This was architectural in character, closely resembling the masonry of the outer face—a smooth socle, a wall-surface of drafted 'blocks,' a wall-entablature and, above the last-named, a zone with engaged colonnettes, the whole carried out in a vivid alternation of black, red and white. None of the drafted fragments is large enough to establish for certain whether the 'blocks' of the inner wall-surface depicted an alternation of tall and short courses, but obviously nothing is more likely than that, in this respect too, the stuccowork of the inner face followed the real masonry of the exterior. Since Masonry Style stucco was already a feature of the architecture of Olynthus (destroyed in 348 B.C.),¹¹⁸ and since there is no trace at Samothrace of any earlier system of decoration, Mrs. Lehmann is surely right in regarding this stuccowork decorative scheme as an original feature of the late fourth-century building.

Any detailed commentary upon these very important and suggestive results must await Mrs. Lehmann's own publication, since they obviously call for a far more thorough reappraisal of the other evidence from the Hellenistic world than would be proper in the present context. There are, however, several respects in which they have a direct bearing on the account given above of the Round Temple in the Forum Boarium and its antecedents, and two of these call for brief mention.

In the first place, the resemblance of the masonry of the Round Temple to that of the Hieron is so very close that it may be said to clinch beyond any reasonable doubt the direct derivation of the former building from Hellenistic models. The socle is rather more elaborate, which suggests that the immediate source was a building erected some time later than the Hieron; but in other respects there does not seem to be any significant difference. Furthermore, although related to the work of Hermogenes, the Round Temple can now be seen to derive from a tradition which was already established in the late fourth century B.C., and which was itself the source of some of the most characteristic features of Hermogenes's own work. This is not to deny the influence of Hermogenes in securing the widespread acceptance of a formula that was much admired and copied later (p. 14). But whereas a building such as the Augustan temple of Mars Ultor follows Hermogenes's version of

¹¹⁸ *E.g.* in the 'House of Many Colours' (*Olynthus*, xii, p. 193, pl. 167) and the 'House of Asclepius' (*ibid.* p. 139, pl. 114). See particularly p. 139, n. 96, correcting an earlier statement (*Olynthus*, viii,

p. 299) that 'relief' (as opposed to 'incised line') type stucco did not occur at Olynthus. It was, however, evidently something of a novelty at Olynthus in the mid-fourth century B.C.

the formula, the Round Temple does not. It derives quite independently from the main stream of Hellenistic practice.

In the second place, the evidence from the Hieron affords welcome support for the suggestion (p. 15) that the interior of the Round Temple was stuccoed with an architectural scheme. That it copied the masonry pattern of the exterior is very likely.

Finally, an additional word about the masonry of the Round Temple may not be out of place. The simple and obvious explanation of this sort of decorative drafting is that it derives directly from the functional drafting that was normal practice when quarrying and laying Greek masonry; so far from being an added feature and a source of extra expense, it was achieved simply by eliminating one or more of the final stages by which the wall would normally have been dressed back to a smooth, even surface, and it may be regarded, therefore, as an ingenious decorative by-product of a functional process. Whether or not, however, this is true of the Hieron, and of other early Hellenistic buildings, it does not seem to be true of the Round Temple. In this case it is almost certain that whatever functional drafting there may have been when the blocks were first laid (and the present appearance of the inner face of the wall suggests that it may not have been very pronounced) had in fact been largely, if not entirely, dressed away, and the wall reduced to a more or less uniform surface, before the present grooves were cut. In other words, whatever the remoter origins of decorative drafting as such, that which now appears on the outer face of the Round Temple is not itself a refinement of a functional feature; it is as purely decorative as the 'drafting' of a Masonry Style architectural scheme in stucco.

Is the Round Temple unusual in this respect? Without a re-examination of the other monuments that illustrate this feature, and in particular of those that are still standing, it is hard to be sure. But there are several considerations which suggest that it is in fact far from unique. One is that the sort of functional drafting which one meets on unfinished Greek walling (*v. Wrede, Attische Mauern, passim*) is far too irregular to have been worked up into decorative drafting of this quality; the very considerations that dictated the adoption of the practice of drafting in the first place (*i.e.* the protection of what were to be the finished flat surfaces during the processes of quarrying, transport and laying) would have applied with no less force to the profiles of these neatly shaped, projecting rectangular features, which would have been just as vulnerable to damage during handling. Another factor is that the sort of rough, functional drafting which one might otherwise regard as a potential preliminary stage of the finer, decorative work is more often than not confined to the sides and lower edges of the blocks; the upper edges were not dressed back, presumably because the projection of the stone allowed for the laying of a string-line along the upper face. Finally, if decorative drafting really were a simple, inexpensive by-product of everyday masonry practice, one would expect it to have been far more common than it was. There are examples of it scattered over a wide range of time and place, from the late fourth century B.C. (the Hieron) right down to the early third century A.D. (the Severan Basilica and Forum at Lepcis Magna). But with very few exceptions the buildings in which they occur are not those in which expense would have been a primary consideration.

Although this may, at first sight seem a rather academic point, it has in fact an important bearing on one of the more tantalising problems of Hellenistic and early Roman architecture, namely the relation between Masonry Style stuccowork and real masonry. As already remarked (p. 15), it is natural to regard stuccowork as simply reflecting the processes and patterns of 'real' architecture. If, however, one accepts that in its later stages the mannerisms of stuccowork were on occasion reflected back into other, more durable, media—and this is surely true, for example, of some of the 'baroque' decorative features of Early Imperial architecture—then there is nothing inherently implausible in the suggestion of similar reciprocal influence at an earlier stage than we can yet document. Already in the late fourth century we find fine decorative drafting in both stone and stucco used, side by side, in the Hieron of Samothrace; and although there can be no doubt whatever that the decorative possibilities of drafting in stone had long been realised (*v. above*, p. 16), and that this was in fact the ultimate source of the idea, its reduction to a formally composed decorative system, with regular bonding and with drafting along all four edges of the block, may well owe something also to the stuccoworker, to whose pliant medium the whole later history of classical stuccowork shows this particular formula to have been so admirably suited. Specifically, it may reflect the lost exterior stuccowork of early fourth century buildings.

Mrs. Lehmann's work at Samothrace not only brings us new and important facts; it also sets fresh standards of meticulous observation and record. Admirable as they were in their day, the researches upon which our knowledge of many of the key monuments of Hellenistic antiquity is based (*e.g.* the temple of Athena Polias at Priene) were far too summary for modern requirements. What is needed in almost every case is a thorough and up-to-date re-examination and reappraisal of the evidence. The results from the Hieron show how very close and direct a bearing the results of such an enquiry can have on the problems of Roman Republican architecture in Italy.

J. B. W. P.

THE CHURCH OF SS QUIRICO E GIULITTA IN ROME

(Plates XII–XVI)

ALTHOUGH the church of SS Quirico e Giulitta near the Forum of Augustus received its present aspect in the first half of the eighteenth century, it is mentioned in the eighth century and the building incorporates ancient elements (which seem to be even earlier than the eighth century) in sufficient quantity to afford a good idea of the main outlines of the original building. It had an unusual plan, but it has received scant attention from students of medieval Roman architecture. The relevant historical data has been collected by A. Rava and L. Montalto in two useful articles¹ but both of these ignore important archaeological evidence; and although the architecture of the church has been mentioned by G. Giovannoni,² his interpretation of it (as a late medieval structure in the “gothic” style) seems to be wholly mistaken.

The essential historical notices, collected by Rava, are as follows :

The earliest known reference is in the eighth-century Einsiedeln Itinerary, where our church appears as ‘Sci. Cyriaci.’ It is again mentioned in twelfth- and thirteenth-century guides.

1475. Sixtus IV found the building in ruins and restored it. An inscription which still exists, though not in its original place reads :

INSTAVRATA VIDET QVIRICVS CVM MRE IVLITA QVE (*sic*) FVERANT LONGA
DIRVTA TENPLA (*sic*) DIE PRINCIPE SVB SIXTO DELVBRIS NVLLA VETVSTAS
HIC REFECIT PONTES MENIA TENPLA VIAS³

c. 1570. Cardinal Bonelli artificially raised the ground on the west side, thus creating Via Alessandria in what had previously been low-lying and marshy ground on the site of the Fora of Augustus and Nerva. Three and a quarter metres were added to the depth of accumulated earth beneath which the fora were then buried,⁴ with the result that the church stood considerably below street level.

1584. Cardinal Alessandro de’ Medici remodelled the high altar and discovered beneath it a very ancient altar which had been consecrated by Pope Vigilius (538–555). This was attested by an inscription then found, which has been subsequently lost. The event was commemorated in a new inscription :

SEDEnte GREGORIO XIII SVMMO PONT. ALEXANDER MEDICES HVIVS
TIT. PRESB. CARD. ARCHIEP. FLOREN. ALTARE HOC A SE TRANSLATVM ET

¹ A. Rava, *Bullettino della Commissione Archeologica Comunale*, 1933, pp. 217–234. L. Montalto, *Bollettino del R. Istituto di Archeologia e Storia dell’Arte*, VI (1933), pp. 127–152.

² G. Giovannoni, *Atti del II Convegno Nazionale di Storia dell’Architettura*, 1937 (Rome, 1939), pp. 229–238.

³ The inscription now embellishes the main

doorway of the church. By its style, the door frame is also a fifteenth-century monument, but neither it nor the inscription are in their original places, and they do not necessarily belong together. Indeed, the inscription seems to have been trimmed away a little, to make it fit the frame.

⁴ R. Lanciani, *Bullettino Comunale*, 1889, p. 30. *Id.*, *Ruins and Excavations*, p. 307.

IN MELIOREM EORMAM (*sic*) REDACTVM AD DEI HONOREM ET BEATT. MARTT. QVIRICI ET IVLITAE SOLEMNI RITV CONSECRAVIT RECONDITIS SACRIS RELIQVIIS EX BRACHIIS EORVMDEM MARTT. TVM ALIIS RELIQVIIS QVAS IDE INVENIT IN ANTIQVISS. ALTARI A VIGILIO PAPA CONSECRATO QVEMADMODVM TABVLA MARMOREA IBIDEM INVENTA DECLARABAT SVNT AVTEM INFRASCRIPTAE PARTICVLA COSTAE S. IOHANNIS BAPTISTAE (etc., etc.)

ANNO DOM MDLXXXIII

DIE XIX FEBRVARIIS

1588. G. Francino⁶ published his woodcut of the west elevation (pl. XII, *a*). This shows:

(i) A parapet following the outline of the apsed façade, which suggests that the church then stood in a hole and was approached by descending steps; presumably the result of Bonelli's raising of the ground level in 1570.

(ii) A three-sided apse with a large window at the centre. The apse roof is much lower than the gable of the main roof.

(iii) Entrances on either side of the apse, apparently leading to vestibules roofed at the same low level as the apse.

(iv) The end-wall of the nave, rising above apse and vestibule roofs. It is decorated with paintings and has two windows with perforated transennae.

(v) The campanile in the rear of the picture, on the right-hand side of the nave.

1588. Pompeo Ugonio⁷ described the church as an undistinguished rectangular chamber with some side chapels. The roof was supported by a transverse arch. The altar stood in an apse, which was decorated with mosaics of S. Stephen and S. Lawrence. There was a portico, much encumbered by later buildings, at the opposite end of the nave, and Ugonio concluded that the main entrance, which in his day was at the same end of the nave as the high altar—*i.e.* the west end—must formerly have been at the opposite end, where the steps of the present high altar are now located.

1606. The church floor was raised on vaults so as to bring it into better correspondence with the ground-level outside. The inscription which records this work can now be seen above the main doorway.

PAVLVS V PONT. MAX. ECCLESIAM HANC TITVLO VACANTE EX DEPRESSIORI LOCO ET AQVARUM INVNDATIONIBUS EXPOSITO IACTIS FORNICIBVS STRATO PAVIMENTO IN ALTIOREM MELIOREMQUE FORMAM RESTITVIT ANN. SAL. HVM. MDCVI

1608-26. During the incumbency of Bernardino Laparini the high altar was removed from the apse and placed at the east end of the nave. A doorway was made in the apse, but the structure of the apse was not removed. Maggi's plan of

⁶ Marble tablet, which is now built into the wall on the north side of the high altar. In Mellini's time it formed part of the front of the altar (Cod. Vat. Lat. 11905, f. 384 r).

⁷ G. Francino, *Le Cose Maravigliose dell' Alma Citta di Roma* (Venice, 1588).

⁸ P. Ugonio, *Historia delle Stationi di Roma* (1588), p. 277 (which, by a printer's mistake, follows p. 284).

1625 shows the apse with a pedimented doorway at the centre. The approximate date of the re-orientation is recorded by Panciroli⁸ and it is also mentioned in a document of the church archives.⁹

1626. It seems that Paul V's restorations were confined to the pavement. When Marco Turoni succeeded Laparini in the benefice he found the church in a ruinous state.¹⁰ In moving the altar to the east end of the nave Laparini had built no chapel or chancel to enclose it. Turoni complained of two inconveniently low cross-arches in the nave. Their bad proportion was presumably a consequence of Paul V's elevation of the floor.¹¹

1630. When these defects had been remedied the following inscription (now lost) was erected:

Ecclesiam divis martyribus Quirico et Iulittae dicatam a Xysto IV paene collabentem instauratam, denuo ruinam minantem in elegantiores hanc formam restituit Urbanus VIII P.M. Anno Sal. MDCXXX Pontificat. VII¹²

1631. The same works are recorded in the archives. '...l'anno 1631 la detta chiesa e stata finita di ristorare con la Cappella maggiore et Altare et quadro delli SS. Quirico et Julitta et archi alzati al tetto.'¹³

1637. Beneath the church floor (which had been raised in 1606) was discovered an ancient chapel with paintings of the Saviour and saints.¹⁴

1676. Falda's plan of Rome shows the west front of the church with no apse.

1728-30. The church having been entrusted to the Dominicans, the building was entirely remodelled. The nave was vaulted. The pavement was again changed to remedy dampness, and fourteen vaulted burial places were arranged beneath it.¹⁵ While this was being done, the foundations of the old apse were discovered underneath the steps outside the west doorway.¹⁶

1733. In building the stairs which lead to the present pulpit through the thickness of one of the side piers, it was found that the pier was not bonded to the wall of the nave and that it covered a fresco of the Madonna which had formerly decorated the wall.¹⁷

* * * *

The restorations of 1730 brought the church to the state which we see it in today. It is entered at the west end through a single doorway embellished with a fifteenth-century doorframe, above which the inscriptions of Sixtus IV and Paul V are displayed. Inside, there is a simple nave, with the high altar standing in a rectangular presbytery at the east end. Each side wall is divided by projecting piers into four arched bays, and light comes from high windows above the arches. The ceiling is vaulted, and over it there is a spacious attic storey which serves as refectory and dormitory for the clergy. The attic storey was built in 1750¹⁸ and the 'gothic'

⁸ O. Panciroli, *Tesori Nascosti* (1625), p. 202. Rava, *op. cit.*, p. 221.

⁹ L. Nardoni, 'Di Alcuni Sotterranee Confessioni,' *Studi e Documenti di Storia e Diritto*, vol. ii (1881), pp. 165-170.

¹⁰ Rava, *op. cit.*, p. 230.

¹¹ A quarter of a century later Mellini noted four cross-arches in his description of the church, c. 1660. (*Dell' Antichità di Roma*. Cod. Vat. Lat. 11905, 383 v.).

¹² F. Torrigio, *Le Sacre Grotte Vaticane* (1635), p. 302.

¹³ Rava, *op. cit.*, p. 231.

¹⁴ A. Bacci, *Nuovo Bollettino di Archeologia Cristiana*, xvi (1910), p. 67.

¹⁵ Rava, *op. cit.*, pp. 228 and 231.

¹⁶ Nardoni, *op. cit.*, p. 169.

¹⁷ *Ibid.*, p. 168; Bacci, *op. cit.*, p. 67.

¹⁸ Rava, *op. cit.*, p. 231.

arches which span it have to be compared with the eighteenth-century Arsenal at Porta Portese rather than with any medieval building. A modest romanesque campanile stands at the south-east corner of the nave. While the north side of the church is hidden by the houses which press against its walls, the south side has recently become accessible during the reconstruction of adjacent buildings, and important parts of the original church walls have been disclosed. These, together with some elements which are seen in the new cellars beneath the nave¹⁹ and Francini's view of the west elevation in 1588, allow us to reconstruct the main outlines of the original building. It too was a simple nave with side-chapels disposed along its side walls, but it differed from the present church in that (a) the orientation was reversed and (b) floor and roof levels were about four metres lower than at present. The walls on which the present roof rests are built up inside the original walls and mask them from the interior.

Analysis of the Ancient Building

A deep sounding, made in 1960 to examine the foundations of the south wall of the nave, revealed that the brick facing continued to a depth of 4.40 m. below the level of the present nave pavement. Underneath that level, trench-cast concrete foundations go down for a further 3.10 m. In fig. 1 the cross-section of the foundations is schematically compared with the adjacent ground, as we know it from

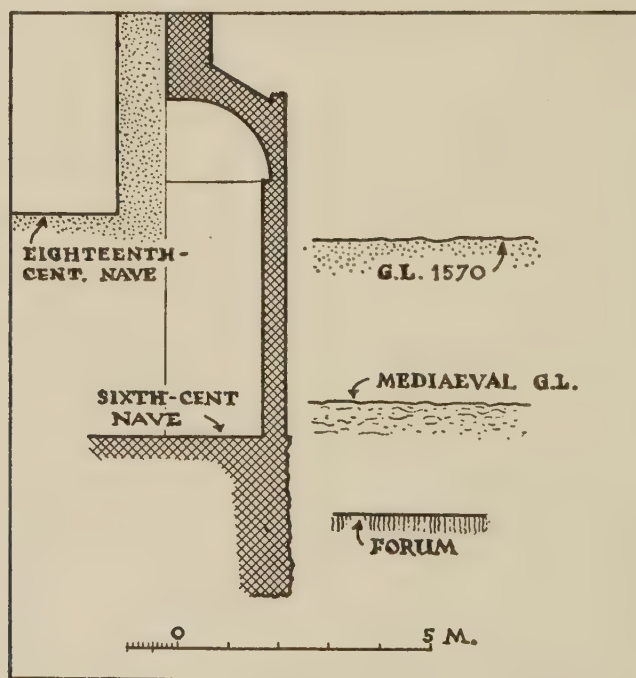
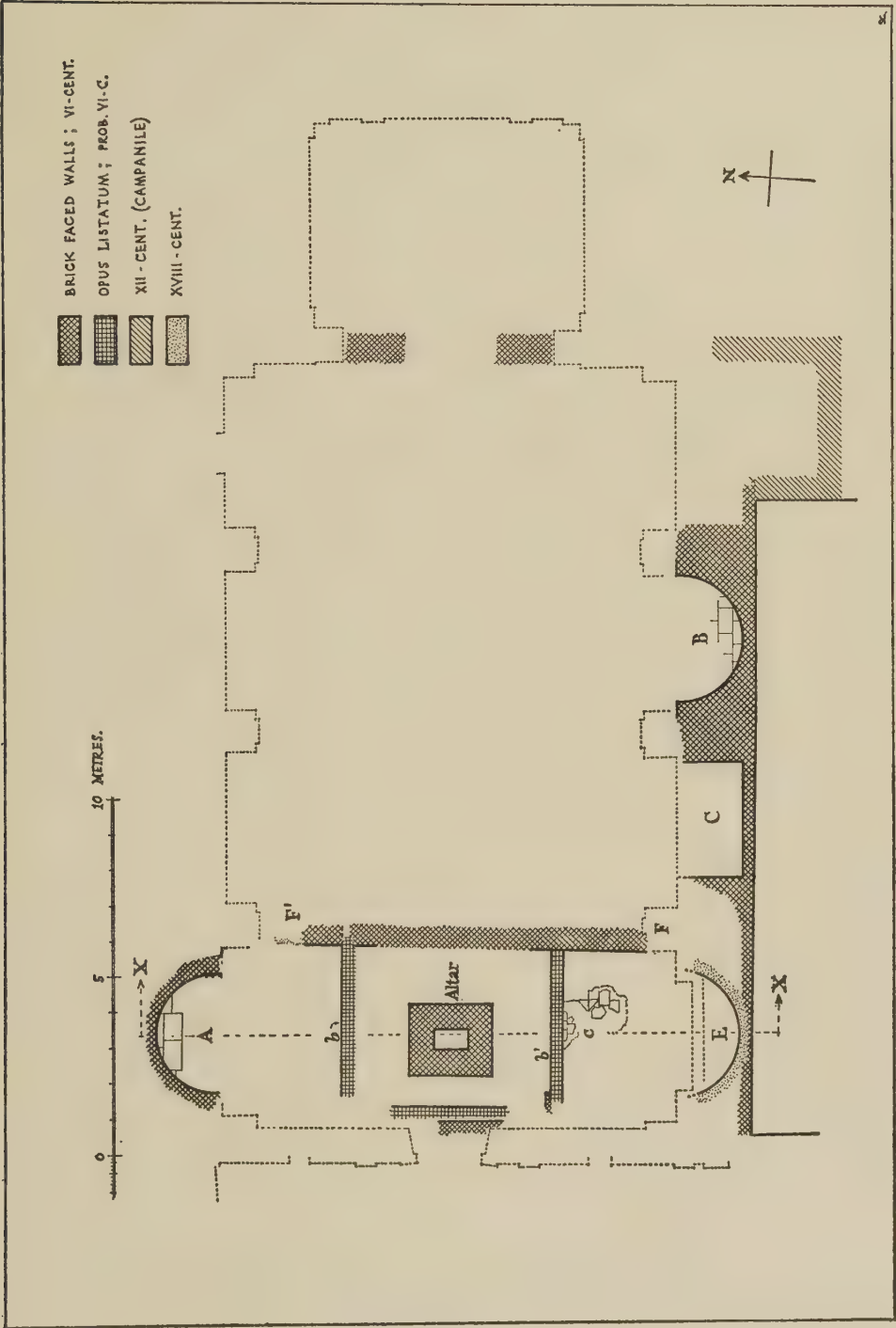


FIG. 1. SCHEMATIC COMPARISON OF GROUND AND FLOOR LEVELS

¹⁹ Some soundings were made in 1930, during which the lower part of the south side-apse (B) came to light (Montalto, *op. cit.*, n. 36 on p. 137).



Lanciani's report on the excavation of the adjoining Fora.²⁰ It appears that the builders of the church dug their foundation trenches to a depth of about one and a half metres below the classical street level and that the latter was already buried about 1,40 m. deep when the church was built. During the centuries that elapsed between the building of the church and the year 1570, less than half a metre depth of detritus accumulated, probably because static water prevented more. About 1570 the marshy land was buried beneath 3,25 m. depth of imported earth in Cardinal Bonelli's improvements.

All the major walls that survive from the original building are faced with brickwork of the sort that is illustrated in pl. XV. The bricks are spoils of more ancient buildings, but are mostly large and of uniform thickness. Courses are horizontal and the mortar-joints are smoothly pointed with a trowel. In doing this, the bricklayer held the tool at a slight angle, so that the face of the mortar coincides with the under edge of the brick course above it but is slightly recessed behind the upper edge of the course below. Courses vary from 5½ cm. to 6½ cm. in thickness (one layer of brick plus one of mortar); that is, from five, to four and a half courses per Roman foot. *Opus listatum* is found only in some minor walls near the high altar, which seem likely to be the footings of chancel screens. Apart from these, all parts of the original structure that can be seen today are brick-faced concrete (except the trench-cast concrete foundations).

About four metres below the present nave floor, in a basement storey which was built when the eighteenth-century tombs were cleared away in 1954, there are two small side apses, one in the north wall of the church and one in the south, but not facing one another (fig. 2, A and B). The upper part of apse B, on the south side of the nave, also appears above floor level in the form of a small half-domed closet hidden behind the second altar on the right hand side of the nave (figs. 3 and 4).²¹ In this closet the vertical apse wall rises 0,80 m. above the present floor and terminates in a horizontal set-back on which the half-dome rests. The upper part of the wall, and the half-dome, are thickly coated with plaster, but where it is seen in the basement the structure of the lower part of the apse can be examined in detail. It is built of brickwork in 5½ cm. courses, with the characteristics described above, except that the bricks are rather small; presumably specially chosen to allow the apse wall to be evenly curved.²² A few flagstones at the base of the wall indicate the apse floor level, which corresponds exactly with the line on the exterior of the building where the brick-faced superstructure rests on its trench-cast foundations.

Flanking this side apse, and nearly corresponding with the second and fourth bays on the right hand (south) side of the present nave, there are two other exedrae (C and D on fig. 3) which differ from the first in that their plan is rectangular instead of semi-circular. Exedra C was swallowed up to a large extent in the construction of the adjacent eighteenth-century house, but part of its vault survives;

²⁰ See n. 4.

²¹ This is the side apse where, in 1909, Bacci discovered traces of medieval painting. Montalto (*op. cit.*, p. 138) says it was behind the fourth altar on the right, but Bacci's own description (n. 14 above) leaves no doubt that it was really the third niche, that is, the second altar to the right. Bacci

thought that these were the same paintings as had been reported in 1637. If anything survives today, it is buried beneath a thick layer of plaster.

²² The apse is too restricted for photography. Giovannoni (*op. cit.*, p. 231) publishes a hand-painted reproduction of the frescoes which still decorate the lower part of the apse wall.

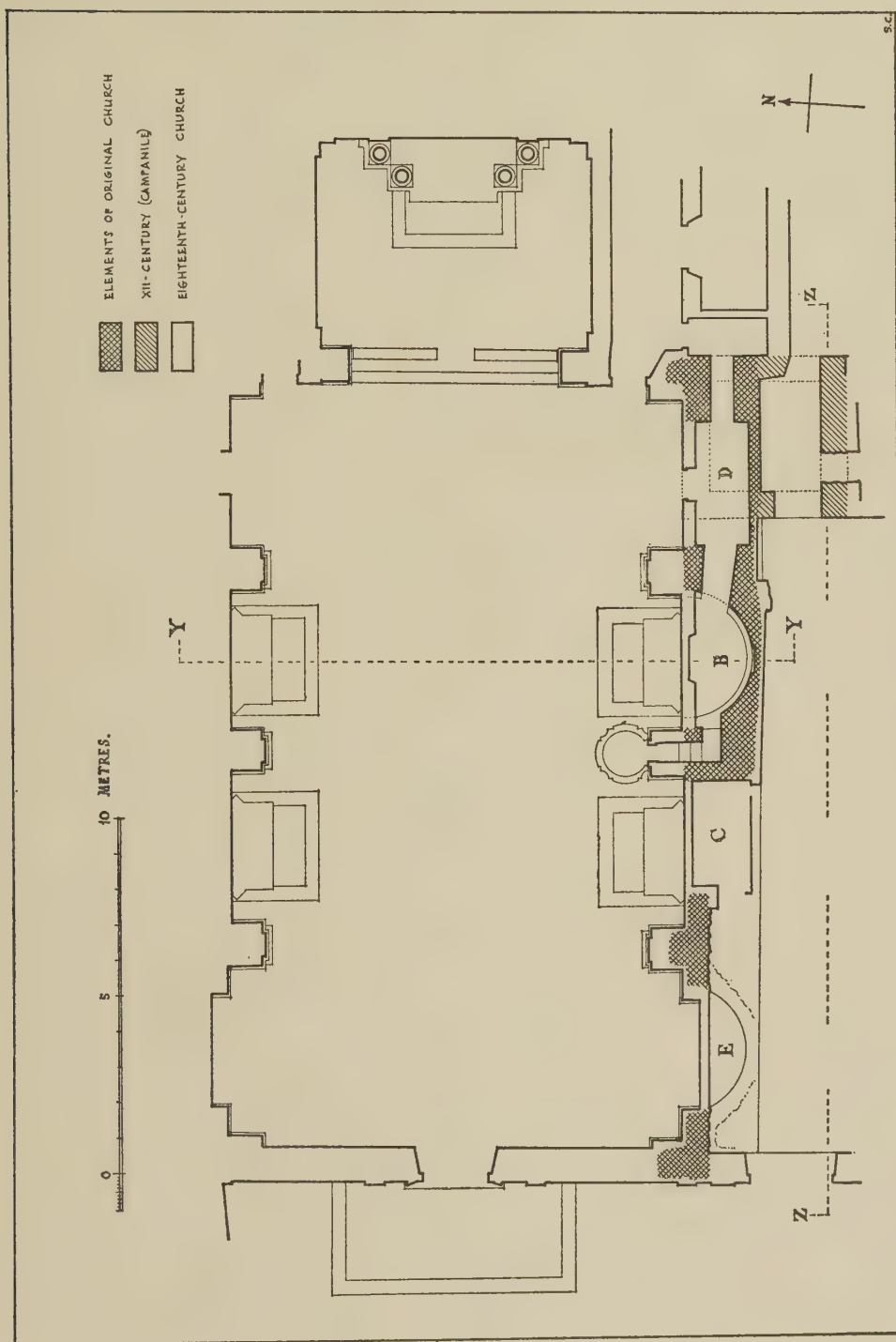


FIG. 3. PLAN OF THE PRESENT CHURCH

a barrel vault with its axis at right angles to the main axis of the church. The removal of the encroaching house has revealed parts of the eastern side, and the rear wall of the exedra. The rear wall is only 0,30 m. thick, and its white plaster lining is painted with a simple trellis pattern; possibly attributable to the period of Sixtus IV's restorations. Exedra D is better preserved. The portion of it which lies below the present nave floor level remains unexcavated, but its barrel vault is visible and intact. It resembles the vault of Exedra C and now forms a small chamber at the base of the campanile. Side apse B is entered from exedra D through a narrow passage tunnelled through the concrete which separates the two vaults. Not much more can be said about exedra D as it is thickly coated with plaster internally, while its exterior is buried in the structure of the campanile. It is possible that an excavation beneath the present floor would reveal wall paintings.

Side apse A, on the north side of the church, corresponds with the westernmost bay of the present nave. Its top half no longer exists, but the lower part, which is seen in the basement, closely resembles the lower part of apse B, except that the diameter is slightly smaller (pl. XIII, *a*). The structure is of small bricks laid in $5\frac{1}{2}$ cm. courses and trowelled in the same way as noted above. The original floor-level is represented by a few marble paving slabs, which lie 0,40 m. higher than the flagstones in apse B. Both A and B have painted decorations of similar character, a white background with a dado of conventionalised hanging curtains. There are a few traces of the upper panels which included human figures, but nothing remains of them beyond the feet, and skirts of the robes.

On the opposite side of the nave from side-apse A there is yet another side-apse, marked E on fig. 2. The small portion of this apse that still survives is evidently *not* ancient, but a quite late construction of small rubble stones set in grey mortar, suggestive of the eighteenth-century. However, the exterior face of the wall which encloses apse E has paleochristian brickwork (as described above) in its lowest courses (see fig. 6), and the apse which corresponds with it on the north side of the church (apse A) is unquestionably an original feature. Consequently there can be no doubt that this comparatively modern feature reproduces an ancient apse, part of which may still exist, concealed, at a lower level. Apse E is so placed that the interval between itself and apse C is somewhat wider than the intervals which separate the rectangular exedrae (C and D) from the semicircular one (B) which they flank. Thus the four exedrae are not evenly spaced but consist of a nearly symmetrical group of three (one round and two square) with a fourth unit set apart to the right. Side apse E is now cut down to the level of the nave floor but it was still intact in the eighteenth century. It was then a baptistery, and it appears on the plan of the church which was found and published by Rava.²³

Midway between the two western side apses (A and E) and about 3,80 m. below the present nave floor, there are important remains of what is almost certainly the original high altar (pl. XIII, *b*). It is a rectangular structure 2,37 by 2,06 m. in plan, enclosing a rectangular cavity 0,92 by 0,58 m. The external face of the rectangle and the interior of the cavity are built in unusually fine brickwork, the $5\frac{1}{2}$ cm. courses being composed of carefully chosen bricks of large size, while the

²³ *Op. cit.*, p. 229. Rava does not report the source of the document.

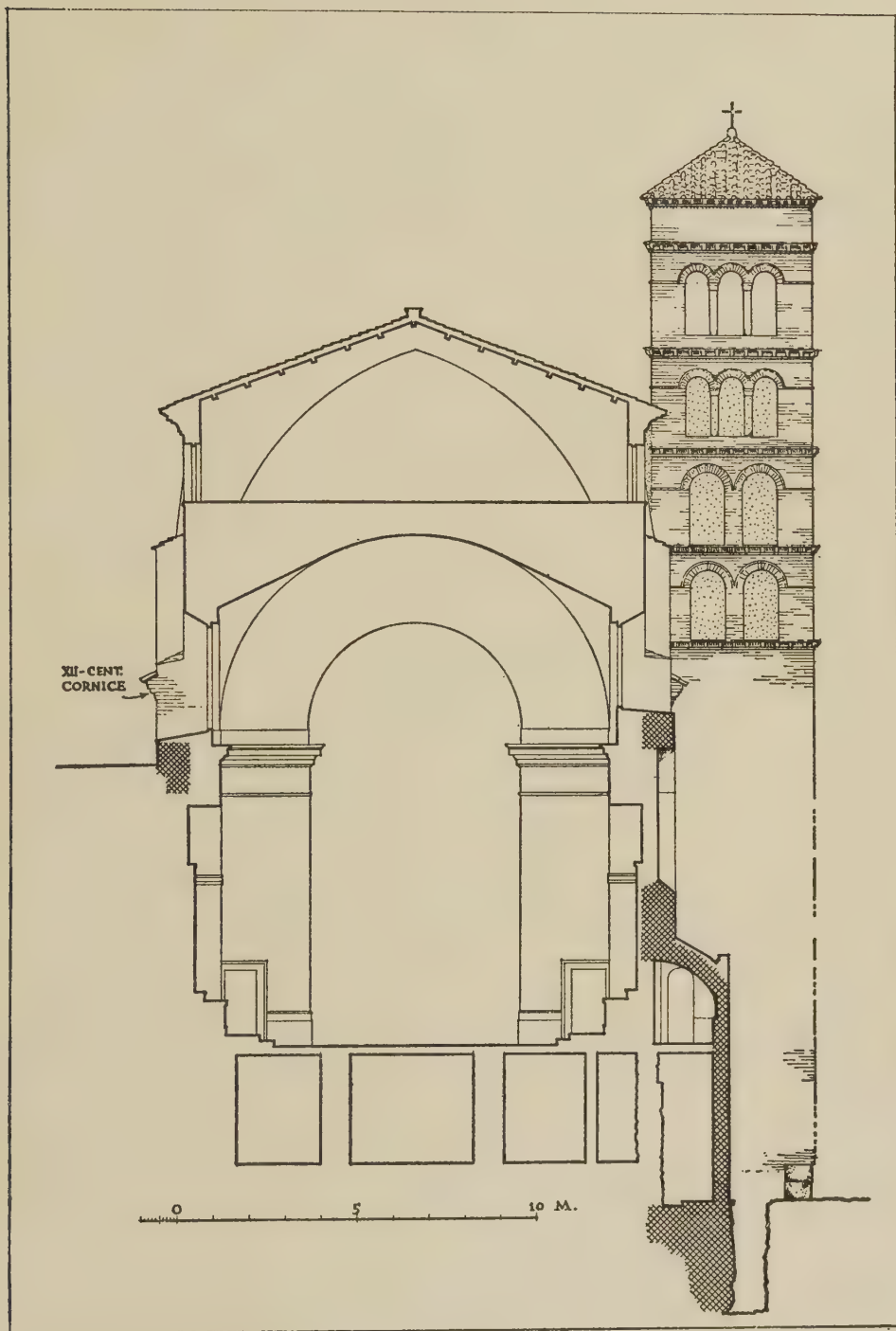


FIG. 4. CROSS-SECTION (LINE Y-Y ON FIG. 3)

inclined pointing seems to be executed with special care. Presumably the relics which Cardinal de' Medici transferred to a new altar in 1584 were found inside this cavity. The part of the altar which survives lay wholly beneath the level of the pavement which once surrounded it. The latter has disappeared but its sub-structure is identifiable in a stratum of compacted rubble, (*a-a* on fig. 5).

The lowest courses of two longitudinal walls built in *opus listatum* (*b*, *b*¹, on fig. 5) stand a short distance to north and south of the altar base. The southern one (*b*¹) is neatly constructed on its south face (pl. XIV, *a*) but the north side is left

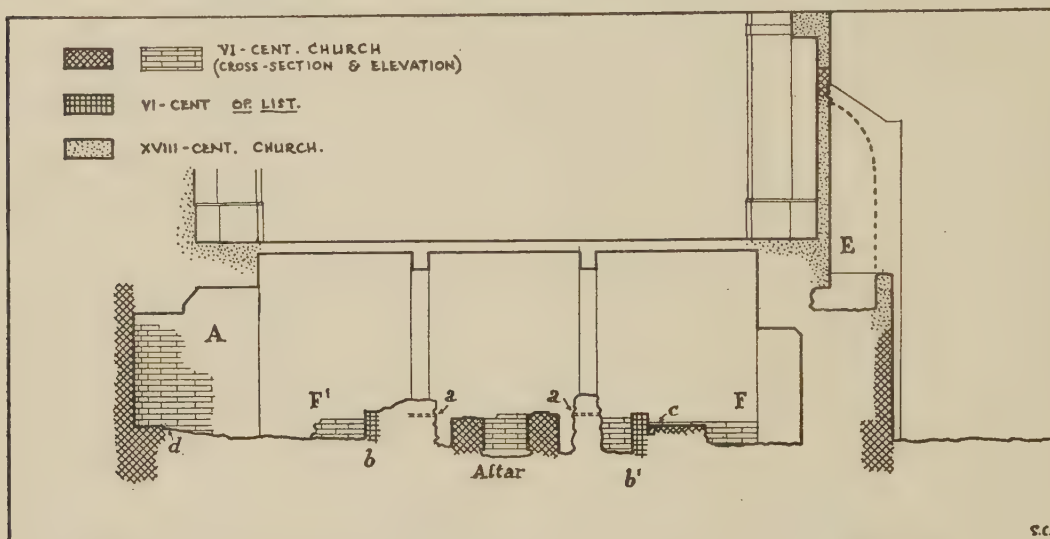


FIG. 5. CROSS-SECTION THROUGH FEATURES BELOW GROUND LEVEL (LINE X-X ON FIG. 2)

rough, suggesting that it formed the south edge of the *bema* (*a-a*). Some fragments of *opus sectile* (*c* in fig. 5) which touch the south face of wall *b*¹ lie at the same level as the flag-stones (*d*) which occur in the northern side-apse (*A*), indicating the level of the floor to the north and south of the central *bema*. This floor, it will be remembered, is 0.40 m. higher than the floor of side-apse *B*.

An *opus listatum* wall which stands on the west side of the altar may be the footing of a step leading up to a higher floor in the apse. A brick wall above it (seen at the rear in pl. XIII, *b*) may be the apse chord. The apse itself remains unexcavated, but its existence is well attested in Francino's engraving (pl. XII, *a*) and in written accounts.²⁴

An important cross-wall (*F-F*¹ on figs. 2 and 5) traverses the nave, to the east of the altar. It is faced entirely with brick. Its junction with the south wall of the nave, now invisible, must occur in the interval between side-apse *E* and exedra *C*. The cross-wall has been cut away towards its northern extremity. The lower courses of the *opus listatum* longitudinal walls (*b* and *b*¹) butt against the cross-wall, but the two highest courses of wall *b* oversail it, proving that the cross-wall did not

²⁴ Nardoni, *op. cit.*, p. 169.

rise above floor-level in the original complex. In our reconstruction of the original building this wall is interpreted as the under-floor span wall of an arch which traversed the nave.

Having thus briefly described the parts of the ancient church that are found inside the present building and beneath its floor, we will now turn to the exterior of the south wall, many details of which have recently become visible, albeit fleetingly, for the first time since the eighteenth century (fig 6).

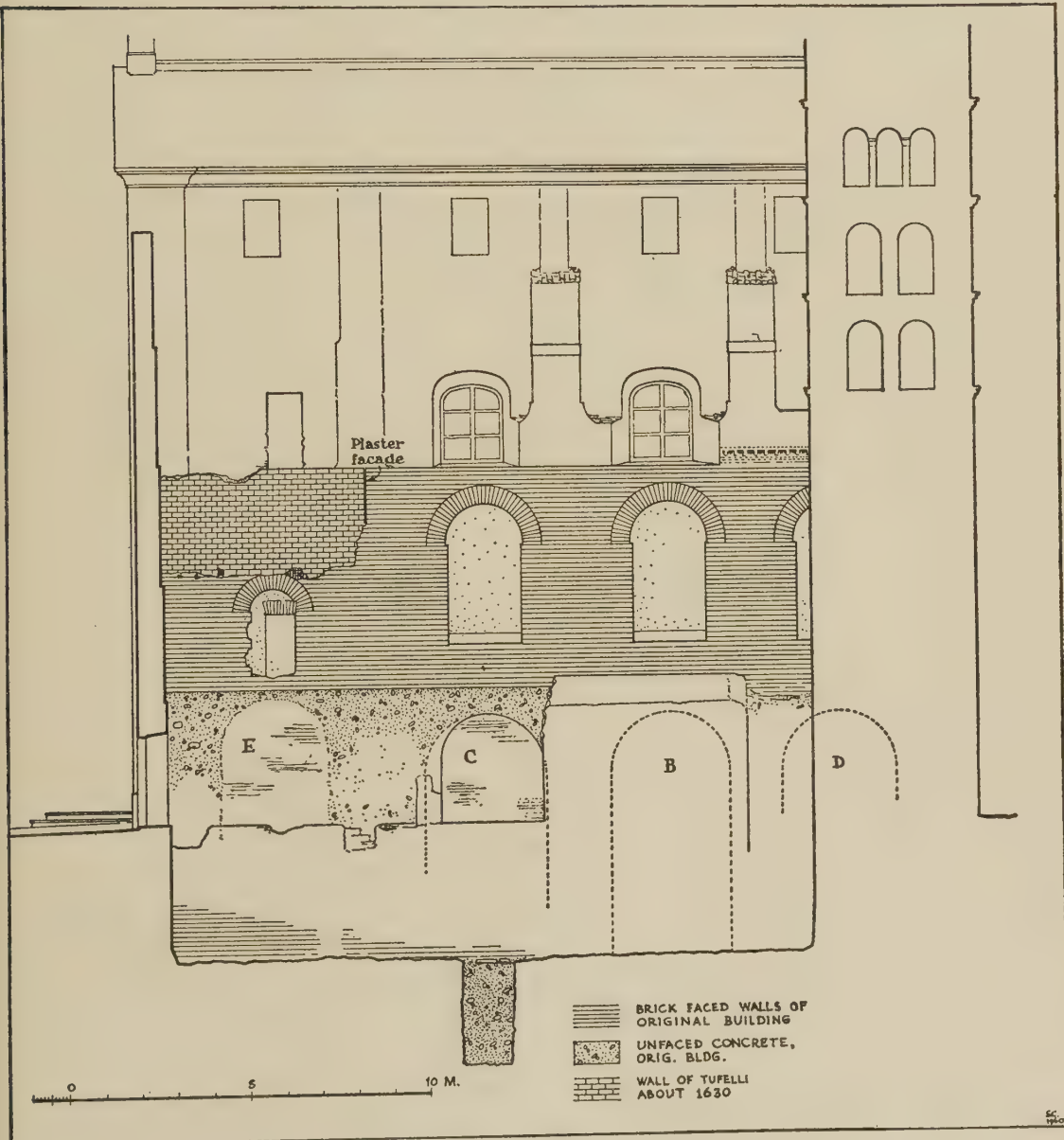


FIG. 6. EXTERIOR OF SOUTH WALL (LINE Z-Z ON FIG. 3)

The four exedrae on the south side of the nave are bounded externally by a straight wall which, in the western half of the church, exists only below present-day street level but, in the eastern half, is more or less intact as far up as the crown of the two niches which it encloses.²⁵ Where the two western niches have been cut down and the concrete core of the nave wall is exposed in elevation, the outline of the former arched openings is distinguishable because the cut-back core of the wall is there replaced by the brick and rubble walls which close the openings. It will be observed that the apex of the western opening is nearly half a metre higher than the other three but, as we noted above, the western apse was probably rebuilt in the eighteenth century and we do not know the height of the one which it replaced.

At its summit the concrete structure of the two eastern niches terminates in a sloping lean-to roof, which bridges the gap between the vertical wall behind the niches and the upper wall of the nave itself (pl. XV). Where the two western niches have been cut away, the scar of the roof is seen as a horizontal line, dividing the mutilated concrete core below from the brick-faced upper wall. The ancient brickwork of the upper wall rises some six metres above the summit of the side niche construction. It is pierced by three very large windows corresponding with the three niches in the eastern part of the nave. These windows are 1,96 m. wide and 3,98 m. from sill to apex. They are capped by neatly turned semicircular arches of radially set *sesquipedales*, which are set back a few centimetres from the vertical sides of the opening. Pl. XV shows that the ancient brickwork terminates in a horizontal line about one metre above the apex of the arches. The upper portion of the eighteenth-century nave wall is seen above it and set considerably behind the brick wall-face. It does not rest on the ancient wall but is built up inside it (fig. 7); only the buttresses of the attic storey which was added in 1750 stand on top of the ancient wall.

The ancient brickwork formerly terminated in a typical romanesque cornice of small marble corbels and saw-tooth bricks. Most of it was removed to make way for the eighteenth-century windows, but it survives in one place on the south side of the nave, near the campanile (fig. 6). On the north side of the church the cornice is in better condition (pl. XIV, *b*),²⁶ and its eastern termination supplies important evidence of the original east wall. It is possible to distinguish the romanesque cornice from the earlier wall to which it was added. The east façade had no cornice; but there were windows, and the jambs of one window and a few voussoir bricks of another, near the north-east corner of the nave, can be seen in the photograph.

While the three side niches in the eastern portion of the nave have each a large arched window above, the fourth niche (at the west end of the south wall) differs from the others in that the wall above it is pierced by a very much smaller window (1,20 by 2,40 m.) which is set at a considerably lower level (pl. XVI). Nevertheless, the brick arch of the window closely resembles the larger ones, and the brickwork of the wall-face extends without interruption from the spandrel of the small window to the flank of the large one; proving beyond doubt that we cannot explain the

²⁵ It must be so, because the vaults enclosed by the wall are intact. However, the outside face of the wall has been so drastically shaved back, re-faced, encroached upon and re-built, in the process of incorporation in the fabric of adjacent houses

(now removed), that the original structure is unrecognisable.

²⁶ On the north side of the church the cornice retains interesting traces of what seems to be original painted stucco revetment.

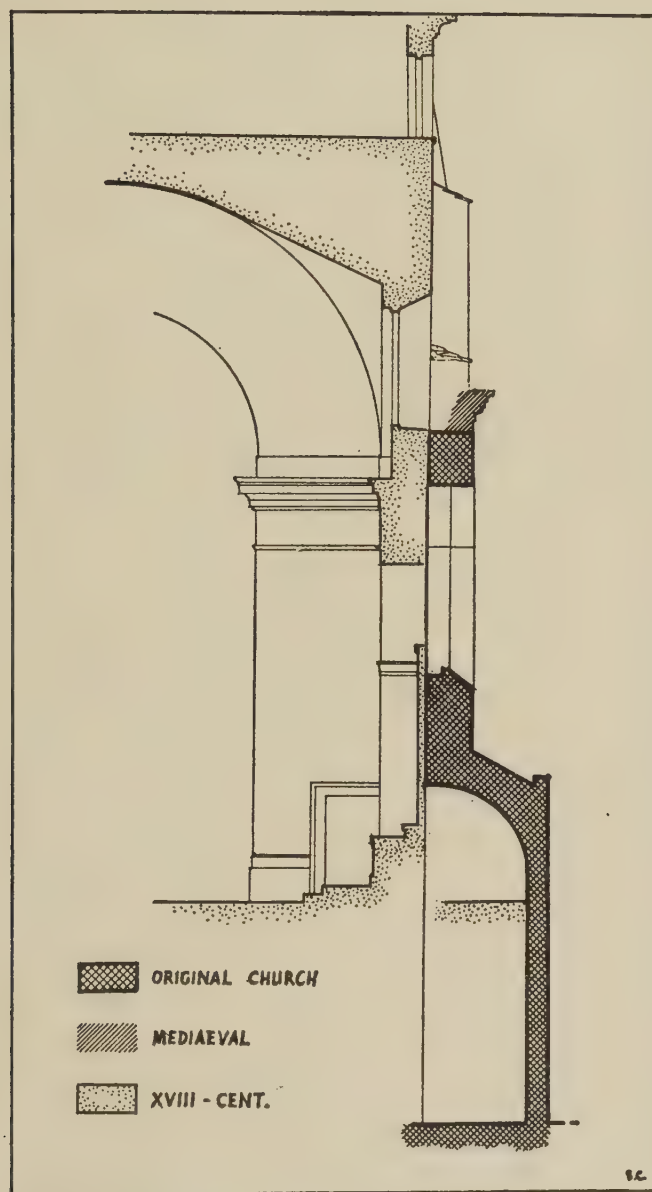


FIG. 7. CORRESPONDENCE OF ORIGINAL WALLS AND EIGHTEENTH CENTURY MODIFICATIONS

anomaly as a secondary modification and that the small window over the western side apse must be a feature of the original design. Above the small window arch, instead of the usual brickwork of the church wall, there is a curtain of small tufa blocks. The brickwork ceases in a ragged but roughly horizontal line over the arch and rises irregularly, to the right, as it approaches the larger window opening. But at a point which is about 1.40 m. below the level of the former romanesque cornice the irregular division between brick and tufa gives way to a vertical joint. The narrow fissure between the vertical arris of brick and the adjacent tufa blocks contains the extreme edge of a plaster wall-face, and the vertical arris may thus be recognised as an external angle between former south and west walls of the church; the west wall having been decorated with plaster, though not necessarily so in its original form. The west façade must therefore have stood in two planes, the upper part running northward from the arris which we have just identified, while the lower part presumably coincided with the present west wall. The upper part of the façade was set back some six metres behind the lower part and thus stood directly over the north-south span-wall (F-F¹) which we noted beneath the level of the original pavement to the east of the ancient altar. We deduce that the nave was traversed in this plane by a wide cross-arch, on top of which the upper portion of the façade rested.

Reconstruction

Combining the data set out in the foregoing analysis with the historical evidence, it is not difficult to reconstruct the main outlines of the church as it must have been at the end of the sixteenth century (fig. 8). Far from being fanciful, Francino's woodcut (pl. XII, *a*) is an accurate record of the church as it was in his time. We only have to make allowance for the fact that he saw the church from an elevated position (the ground artificially raised by Cardinal Bonelli) and was thus impelled to make the upper part of the façade slightly over-dominant. In all other respects the woodcut can be interpreted in perfect harmony with the data which we receive from other sources.

Although, as Ugonio noted, the main entrance to the church had once been at the east end of the nave, in Francino's time it had been replaced by other doorways, disposed on either side of the apse. They must have led into small vestibules to north and south of the altar and thence, through the broad arch which spanned the whole church and supported the upper part of the west façade, into the main part of the nave. Francino's picture shows small arched windows in the spandrels of the cross-arch and a painted panel occupying the central part of the gable. It is puzzling that the view which was published by Aló Giovannoli in 1618 (pl. XII, *b*) shows a round window where Francino has a painting, but this may be explained if we suppose that Giovannoli's engraving was based on drawings made before the painted panel was added. The panel may possibly have been one of the improvements made by Cardinal Alessandro de' Medici in 1584.²⁷ The paintings were not

²⁷ The prominence given by Francino to the painting suggests that it was then new, and Cardinal de' Medici was undoubtedly responsible for some of the paintings in the church. This is attested both by Mellini (*op. cit.*, f. 383 v.), and in another

description, written about a century later, wherein the anonymous writer recalls seeing the Medici arms in the paintings which decorated the old church before the eighteenth-century remodelling (Nardoni, *op. cit.*, p. 169).

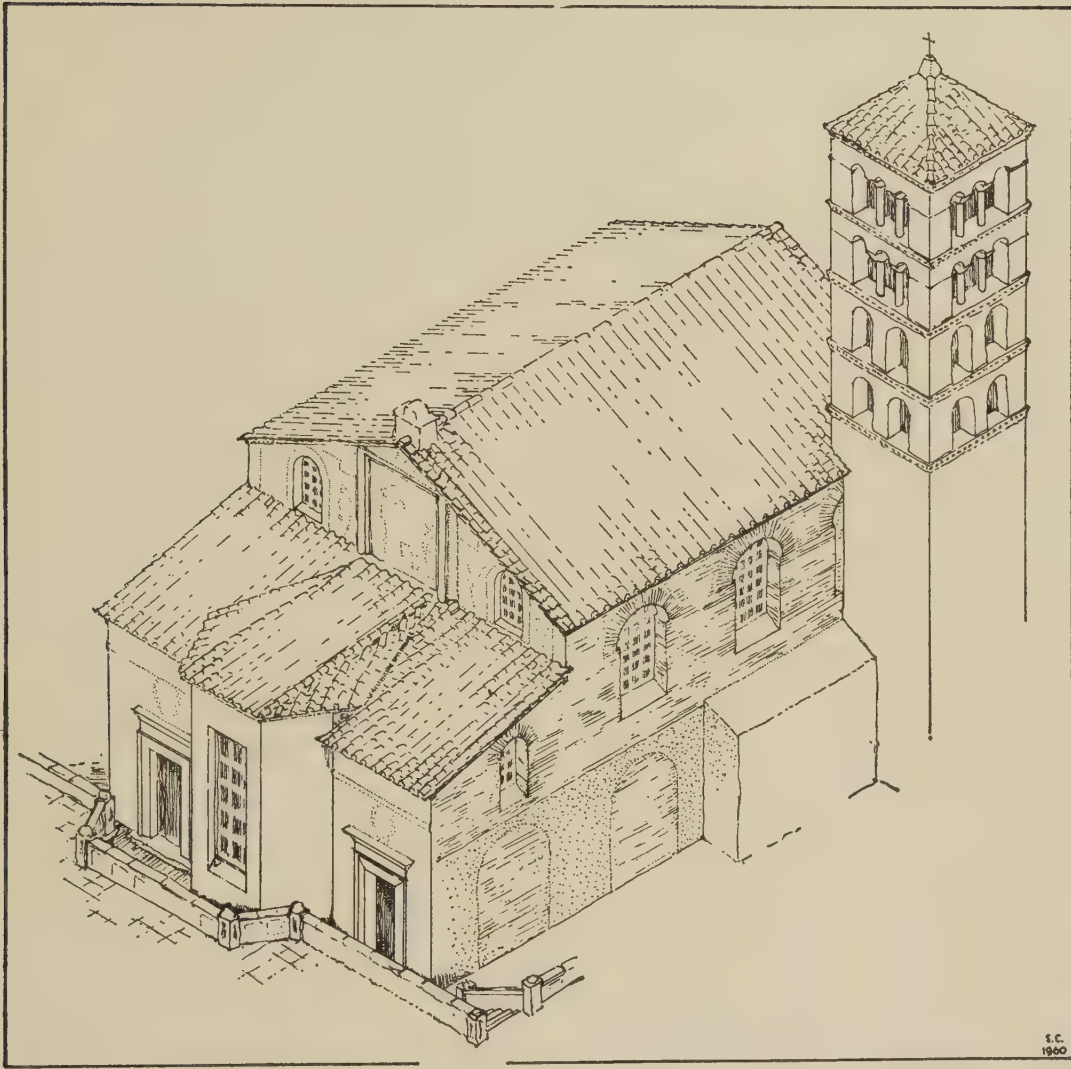


FIG. 8. APPEARANCE OF THE CHURCH IN THE SIXTEENTH CENTURY

confined to the central panel but extended over the whole gable wall, as Francino shows. The southern extremity of the plaster background of these paintings is visible in pl. XVI (see also fig. 6).

It is important to note that Francino shows an apse with three flat walls externally. Except for the sixth-century example at S. Giovanni a Porta Latina, the three-sided apse is otherwise unknown in Rome, and its appearance at SS. Quirico and Julitta is an indication of the date of the church. The large oblong window is probably a renaissance feature. The parapet wall which Francino shows in the

foreground must have been built to protect the pit in which the church stood after the land around it had been raised (*ca.* 1570) by Cardinal Bonelli.²⁸

In its original form the church must have been very much as Francino drew it, except for the romanesque campanile and the entrances beside the apse (*fig.* 9). The original entrance, at the east end of the nave, led into a plain rectangular hall with three niches in each side wall and three large arched windows above them. There were other arched windows in the east wall, above the entrance. The gable wall at the west end of the nave was supported on an arch which spanned the church from north to south; behind it lay the *bema*, high altar and main apse, all roofed at a lower level than the nave. The gable wall had a circular window in the middle (Giovannoli), flanked by round-headed windows with pierced transennae (Francino). To right and left of the high altar there were apsed side chapels, roofed at the same level as the *bema*. Their apses faced north and south, like those which flanked the nave, but it is clear from their different spacing and floor level that they are, organically, part of the chancel or sanctuary. The floor of the two side chapels in the chancel was 0.40 m. higher than that of the nave (shown by the pavement of apse B) and there must have been a flight of three steps located, presumably, close to the main cross-arch. The floor of the *bema* was at least one step higher again, and it was separated from the side chapels by chancel rails or an iconostasis, which stood on foundation walls *b* and *b*¹ (*fig.* 5). The apse floor seems to have been higher still. We know nothing of the apse except that its exterior was three-sided and that it was decorated internally with mosaic pictures of S. Lawrence and S. Stephen (Ugonio). It will be noted that the arrangement of the apses gives the chancel a trefoil plan.

Whereas the nave was brightly lit by the six large windows in its side walls and other windows in the gable walls, the chancel seems to have been gloomy in contrast. We do not know what windows there may have been in the apse and the west walls, but the illumination which entered through the small windows above the side chapel apse-heads can never have been bright. It seems probable that the architect's intention was to build a tall nave, spacious and brightly lit, contrasting with a low-roofed chancel, which was relatively dark and withdrawn behind the great cross-arch.

Finally, it may be useful to add a brief summary of the history of the church since the sixteenth century. The inconvenience of being situated three and a half metres below ground level (which resulted from Cardinal Bonelli's raising of the ground) was remedied in 1606 when Paul V raised the floor, but this merely resulted in another inconvenience, namely that the roof was then too low.²⁹ About 1620 the altar was taken away from the main apse and placed at the east end of the nave and a doorway was opened in the apse where the altar had formerly been.³⁰ At

²⁸ Armellini (*Le Chiese di Roma*, ed. Cecchelli, p. 222) wrote 'Nell' archivio di S. Marco ho trovato un documento dal quale risulta che nell'entrare in questa chiesa si calavano alquanti scalini.'

²⁹ See n. 11, above. Turoni complained of two low arches, and one of them must have been the arch which supported the west gable wall. The other arches are not identifiable at present, but

they may be supposed to be strengthening arches inserted to reinforce the roof. They were noted by Ugonio.

³⁰ It is seen in Maggi's plan of 1625. There were then three doorways in the west front. When the apse was removed a central doorway took its place, as Nardoni's anonymous writer attests (*op. cit.*, p. 169).

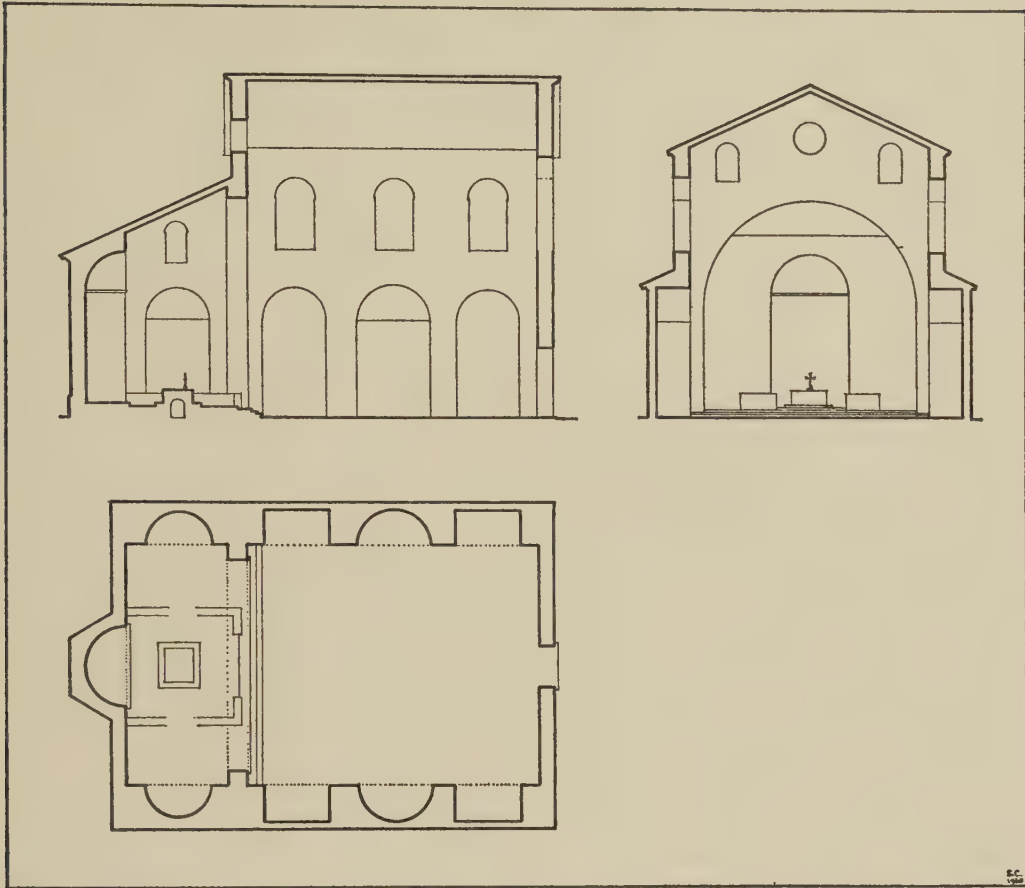


FIG. 9. RECONSTRUCTION OF THE CHURCH IN ITS ORIGINAL FORM

first no permanent chapel was made for the altar in its new place.³¹ Between 1626 and 1631 the church was improved by building a proper chapel for the altar and by removing, or heightening, the cross arches, though the eaves level seems to have remained unchanged. It is probable that the three-sided apse was removed at this time and that the low north and south walls of the former *bema* were heightened, thus converting the low-roofed western chancel into part of the nave indistinguishable from the rest.³² The church remained in this state for a hundred years until, in 1728, it was entirely remodelled and brought to its present state. To do this, the windows and side apses were blocked up and new side walls were built inside

³¹ Turoni (cited by Rava, *op. cit.*, p. 230).

³² It is surprising that the material used in heightening the side wall is the so-called *Saracinesca* masonry (small blocks of tufa used as though they were bricks) which, in Rome, is commonly associated with the later middle ages; e.g. The Lateran Campanile, S. Nicola a Capo di Bove, the

old Lateran Palace. Nevertheless, Francino's woodcut leaves no room for doubt that the wall was built after 1588. Possibly the masons made use of medieval *tufelli* which lay to hand. Similar masonry occurs near-by in the south wall of the convent of S. Catherine a Magnanapoli, but its date is uncertain.

the old ones, ensuring that the old structure did not have to bear the weight of the heightened walls. The roof level was raised and new windows were made at the level of the former cornice. The ceiling was vaulted and, last of all, "pointed" brick arches were added to support the roof of the top storey.

Conclusions

The very large windows and accurate quality of the brickwork make it impossible to date the original church later than the sixth century; indeed, taken by themselves, these features suggest the fifth. However, the chapels on each side of the altar (prothesis and diaconicum), the three-sided apse wall and the trefoil plan of the chancel are all indications of Byzantine influence; supplying weighty confirmation of the tradition contained in the lost inscription³³ which reported that the altar was consecrated by Pope Vigilius (538–555). Moreover, the technique of pointing brickwork with an obliquely held trowel appears in Roman buildings of about that period (*e.g.* S. Sisto Vecchio, S. Marco, alterations to the Titulus Equitii). The original building of SS. Quirico e Giulitta is therefore assigned to the first half of the sixth century. S. Balbina, Rome, is an obvious parallel, but it was built two centuries earlier than SS. Quirico e Giulitta, and it is doubtful whether it was originally designed to be a church. However, there can be little doubt that the architect of our church was familiar with S. Balbina, and his design was probably based upon it. Moreover, it may be significant that the earliest definite reference to S. Balbina as an ecclesiastical building occurs during the sixth century.³⁴ The conversion into a church of a secular building with side-niches, might inspire the design of another church on the same lines.

Side niches in a radially planned nave are common enough but, as far as we know, SS. Quirico e Giulitta is the only metropolitan example of an early Christian church where such niches are applied to a rectangular nave. It thus seems to have been an experiment in church design, apparently unrepeated, and it is not surprising that it dates from a period when Rome was dominated by Constantinople, a city which was then witnessing some of the most adventurous experiments in church architecture that have ever been tried.

SPENCER CORBETT

Postscript

The details of the south façade, described above, were visible for a few weeks during the summer of 1960. By the time these pages are published the wall will be hidden, more completely than ever, by adjacent buildings.

³³ Nothing is known of this document except what is reported in the inscription of 1584 (above, p. 33). The original was preserved for a time, but early in the seventeenth century it was carelessly built into the foundations of some new structure—

probably, but not certainly, the exedra for the new high altar, which was built *c.* 1630 (Mellini, *op. cit.*, f. 384 v.).

³⁴ R. Krautheimer, *Corpus Basilicarum Christianarum Romae*, vol. i (Rome 1937), p. 91.

SEVEN NEW INSCRIPTIONS FROM TRIPOLITANIA

(Plates XVII–XIX)

THE seven inscriptions described below were recorded by O. Brogan during journeys made in the Tripolitanian hinterland in 1958, 1959 and 1960, and are published here with the kind permission of Dr. E. Vergara-Caffarelli of the Department of Antiquities in Tripoli.

1. *Ain el-Auenia, Gebel Nefusa*

(For earlier inscriptions found on this site see *IRT*, nos. 856–858)

Brown limestone block, broken away at the right side ($0.94 \times 0.56 \times 0.17$) inscribed on one face within a moulded border (panel, 0.88×0.47); as a result of re-use the face is badly damaged and in part obscured by mortar which it has proved impossible to remove without danger to the surface. Found in 1958, south of the Jefren-Zintan road (map 1/100,000, sheet Giado, 1672, U788719) mid-way up the hillside above the wells; now in Tripoli Museum.

Second to third century capitals; 0.04. There are ivy leaf stops after the abbreviations LEG and AVG in l. 6.

Photo: *Dept. of Antiquities*. See pl. XVII, a.

Soli Hierobolo¹ pro sa[lute]
 dominorum n(ostrorum) Aug[ustorum trium]² Se
 ueri et Antonini e[t] Getae]³
 e[t] Iuliae totiusq[ue] do[mus]
 5. diuinae⁴ p[er] vexilla[tio]
 nem leg[ionis] III A[u]g[ustae]⁵ et mil[ites]
 coh[or]t[is] S[yro]u[m] sagit
 [ta]riorum⁶ a solo [. . c. 8 . .]⁷

¹ Also in *CIL* III, 1108 = *ILS*, 4344, and usually identified with the Palmyrene god 'Iaribwlos, see Roscher, *Lexicon*, s.v. Hierobolus. It is possible that there were Palmyrenes among the soldiers of the Syrian cohort mentioned in l. 7 below, or that the cult is due to the influence on legion III Augusta of the *numerus Palmyrenorum* which is known to have served in N. Africa in the late second and early third centuries A.D. (Cagnat, *L'Armée romaine d'Afrique*, p. 205 f.).

² NN̄ AVGG[G]; an ivy leaf has been cut over the erased third N. The inclusion of Geta among the Augusti should indicate a date after 208, but he is given the title informally in N. Africa in a number of texts of earlier date, see, e.g. *IRT*, 913–916 from the fort of Bu Ngem.

³ The words *p[er] fe[l]icis* have been cut over the erased name of Geta.

⁴ For the formula, cf. e.g. *ILS*, 428. The omission of any title for Iulia Domna seems unusual.

⁵ This is the first clear indication of the presence of a military detachment at Ain el-Auenia, and confirms previous conjectures that the site is one of the stations of the *Limes Tripolitanus*. The activity of the garrison recorded here may be compared with that attested at the similar station of Ain Wif in *IRT*, 868.

⁶ It is just possible that a number was given for the cohort; if so there is hardly space for more than one figure, I. The unit is, in fact, almost certainly to be identified with the *Cohors I Syrorum* of A.E. 1892, 13, from the region of Lambaesis.

⁷ Presumably *fecit*, *construxit*, or some such word stood here. The absence of the name of the person who undertook the work, probably the garrison commander, is singular. Since there is no lower moulding on the block it is possible that his name appeared on a second block which stood below this one on the building.

2. *Ain el-Auenia* (see no. 1)

Triangular-topped stele¹ of brown limestone (0.40 × 1.15 × 0.20) inscribed on one face. Found in 1959, near no. 1 above; now in Tripoli Museum.

Letters, third to fourth century; ll. 1–6, 0.05; ll. 7, 8, 0.025; A without a cross-bar.

Photo: *Dept. of Antiquities*. See pl. XVIII, a.

D(is) M(anibus) S(acrum)
 Migin² p(ius)³
 mil(es) leg(ionis) III
 Aug(ustae) uixit
 5. an(nos) CXI⁴ mi sic
 litauit an(nos)
 VIIII fec(erun)t conta
 bernaless⁵ acius⁶

¹ This form of stele is characteristic of Romano-Libyan tombstones, cf. *PBSR*, XXIII (1955) pl. XXXVI, a.

² The name is Libyan (see, e.g. *CIL* VIII, *Index Cognominum*, s.v. Miggin), although not hitherto attested in Tripolitania. Its appearance here is striking evidence for the recruitment of Libyans into Legion III Augusta, and the absence of a Roman praenomen and nomen are also indications of a lowering of the standards of legionaries.

³ Probably the most satisfactory resolution of this abbreviation here.

⁴ It seems probable that the cutter intended to write XXX.

⁵ For this spelling cf. *CIL* V, 4676.

⁶ For this spelling, cf. e.g. *CIL* VIII, 164, 4623, 5036.

3. *Ain el-Auenia* (see no. 1)

Semi-cylindrical tombstone of limestone¹ inscribed on one end (0.39 × 0.49 × 0.87) within an incised border (panel, 0.30 × 0.43). Found in 1959, near nos. 1 and 2 above; now in Tripoli Museum.

Letters; 0.03–0.045; A without a crossbar; the final letter of l. 6 on the border.

Photo: *Dept. of Antiquities*. See pl. XVIII, b.

D(is) M(anibus) S(acrum)
 Corneli
 a Quintul
 a uixit an
 5. nis XXII <M>²
 maritus eius
 fecit³

¹ Another typically North African form.

² Possibly the cutter intended to write m(ensibus) . . . or this represents a rejected attempt at the first letter of *maritus*.

³ The text illustrates the existence and a little of the character (a mixture of Roman and native forms) of the civil settlement that grew up beside the military station.

4. *Garian-Mizda road*

Two blocks of limestone, probably adjoining, (together, 1.66 × 0.51 × 0.37) inscribed on one face within a rectangular panel (0.91 × 0.39) flanked at either side by linked pairs of S-shaped scrolls in shallow relief and set within a sunk area; the inscribed surface on the second (right) block is completely worn away.¹ Found in 1960, under the guidance of Sig. Fabbri, in the ruins of a mausoleum on a low hill c. ½ km. east of the Garian-Mizda road, c. 24 km. south of Bu Zeian (map 1/100,000, sheet 1673, Gasr er-Resciada, 267697).

Letters, perhaps third century; 0.06; Y for V in Ius[ti, l. 2.

Photo: O. Brogan.

- D[i]s Manib[us ? Sacrum Ta]
 rquiti² Ius[ti³ . . ? 8 . .]
 is Gabini f(ili)⁴ [. . ? 10 . .]
 Bagis⁵ et Iu[. . ? 10 . .]
 5. [.]hyr agii[. . ? 10 . .]⁶

¹ The inscription lay alongside a stone bearing a sculptured relief of a camel; if its letter forms are correctly dated this association would produce a useful piece of evidence for the presence of the camel in Tripolitania before the fourth century; see Olwen Brogan, *PBSR*, XXII (1954) 126 f.

² For Tarquiti in Africa see, e.g., *CIL* VIII, 2569 l. 6, 22770; the *nomen* perhaps derives ultimately from the proconsul, Q. Manlius Ancharius Tarquiti Saturninus, *IRT*, 300.

³ Iustini or Iustiniani are also possible; another cognomen giving a genitive in -is presumably followed.

⁴ *F(ili)* may be the genitive, indicating that Tarquiti was the son of Gabinius, or the nominative, indicating that his sons, whose names followed (see the remains of l. 4), made the monument.

⁵ Cf. *IRT*, 833. Bagaus.

⁶ The reading is certain; the text has apparently lapsed from Latin into Libyan.

5. *Gasr Isawi, Wadi Migdal*

Limestone block inscribed on the exposed face, the main part of the inscription within a *tabella ansata* flanked by reliefs of birds of prey, probably eagles, the one on the left holding a gazelle or lamb in its claws, the other holding a bird, probably a dove; *in situ* above the door of a *gasr*¹ in the lower part of the Wadi Migdal, on the left bank, c. 10 km. above its junction with the Wadi Gharghar and 7 km. above the large tower-tomb known as Senam Migdal (map 1/500,000, Sheet 8, Mizda, 9510 approx.). The *gasr* was recorded before the war by Col. Bauer, but the inscription is illegible in his photograph; it was observed again in 1956 by Mr. Muir, an oil geologist, and finally examined by O. Brogan in 1959.

Local fourth to fifth century capitals; 0.02; ll. 1–8 cut between guide lines; ll. 9–11, cut below the *tabella*, are a little rougher, and cut without guide-lines.

Photo: O. Brogan. See pl. XIX.

- Marcus Metasan²
 Fidelis³ filius et Fl(abi ?) H
 anochulam⁴ et Sei
 c[. .] et Fidei[is]³ nepo
 5. t[es .]SSIPSA Fl(abiæ ?)
 et PVII hanc I[. .] ulam⁶
 instituerunt [. .] V [. .]et
 SDP[.]VIS bibant
 NYMYSAGENPVVBVNOM⁷
 10. MRAYSYNV[.]YSFELVMBVL
 AYBYDBANNOM

¹ A finely-built example of a larger pre-desert fortified farm; the inscription is of particular interest since comparatively few have come from such buildings, and the reliefs on either side of the inscribed panel because these motifs are more usually found in funerary contexts; cf, however, the relief above the doorway of *Gasr Nagazza*, Nesma, Wadi Sofeggin, showing an eagle carrying off a hare.

² Cf. M. Metusan at Ghirza, *IRT*, 900, l. 2.

³ Cf. Fidel and Fydel, both at Ghirza, *IRT*, 899, l. 4, and 900, l. 1.

⁴ Cf. Chullam at Ghirza, *IRT*, 899, l. 1, and perhaps Anachulam in the Wadi Umm el-Agerem, *IRT*, 906 = *PBSR*, XXIII (1955), p. 142, l. 5.

⁵ For the connexion of the second and third generation with a family monument cf. *IRT*, 898, ll. 13, 14, and *IRT*, 900, ll. 8–10, both from Ghirza.

⁶ Perhaps *et hanc tabulam*.

⁷ The final lines are in Libyan; two groups of letters—at the end of l. 9 BVNOM perhaps meaning 'work' or 'monument,' and in l. 10 FELV probably meaning 'made,'—also occur in *PBSR*, XXIII (1955), p. 141, no. S24, l. 2.

6. *Gasr Bugar, Wadi Umm el-Acherab, Wadi Nfed*

Left part of a lintel block of limestone (0.40×0.29) inscribed on one face which is moulded above and below. Found in 1959, on information given by Lt.-Col. A. Gehemi of the Tripolitanian Police, *in situ* above the doorway of a *gasr* (map 1/500,000, sheet 9, Bu Ngem, 6398). The doorway is elaborately decorated with compass-traced circles.

Fourth to fifth century local capitals, cut between guidelines; ll. 1, 4, 0.04; ll. 2, 3, 0.03.

Photo (of a squeeze) : R. Johnson (*O. Brogan*). See pl. XVIII, c.

FLANAHIAV[...]¹
 NOHVSVDṚVÇA[...
 BVTHAIVBĀVN[...]²
 RIANRANONĪ[...

¹ The inscription is comparable in letter forms and layout to those from the early fifth century *gsur* on the Tripolitanian Gebel, such as *IRT*, 875, 876.

Six other *gsur* in this wadi were examined; none yielded any inscriptions or appeared ever to have had texts cut above their doors.

² TH in ligature.

7. *Muagen Ngorta, Wadi Sceta,*

Lower right corner of a block of brown limestone ($0.52 \times 0.30 \times 0.11-0.13$) inscribed on one face within a *tabella ansata* defined by a raised border. Found in 1958, on information given by the Mutassarif at Beni Ulid, in the hut of the Sheikh responsible for the cisterns (map 1/500,000, sheet 9, Bu Ngem, 6590);¹ now in Tripoli Museum.

Very rough local fourth to fifth century capitals; 0.035-0.04; the last letter of l. 5 outside the border; ll. 4, 5 slant upwards to the right.

Photos : *Dept. of Antiquities*. See pl. XVII, b.

...]ARI
 ...]LVTHC
 ...]NI SYT
 ...]VSSNIMMAH²
 5. u. CHRVSVBVN

¹ The cisterns are Roman in origin; nearby are a large *gasr* and a Roman cemetery, the monumental tombs of the latter now completely destroyed. There is no place for an inscription above the door of the *gasr*; the stone presumably comes from the cemetery.

² For S = ST see *PBSR*, XXIII (1955), p. 128, no. S.8, n. 2.

OLWEN BROGAN AND JOYCE REYNOLDS.

VEII: THE VALCHETTA BATHS ('Bagni della Regina')

(Pls. XX—XXV)

THE plateau on which the site of Veii stands is bounded by the steeply eroded valleys of the Fosso Piordo and the Torrente Valchetta, the ancient river Cremera. A kilometre to the north-east of their confluence near the Piazza d'Armi, the site of the bath-house serving the Roman *municipium Augustum Veiens* was exposed by river erosion in November 1959 (fig. 1). It lies across the narrow floor of the Valchetta ravine, where the river has changed course frequently since classical times. The ancient approach probably lay along a small track leading from the edge of the main town plateau immediately above the baths. This choice of position, which certainly had pre-Roman associations, was determined by the presence of a number of hot springs which break through the valley floor at this point. They are the result of quiescent volcanic activity; another example occurred on the opposite side of Veii, in the Vignacce area of the Fosso Piordo.

The site was known to antiquarians of the last century. Canina mentions the baths briefly (p. 73) and reproduces an engraving of them (Tav. XX) in *Antica città di Veio* (1847), which presumably shows the outer shell of the building before the river broke into it (pl. XX, a). It illustrates a vital point in understanding the remains as they stand at present. There is no reason to doubt the exactness of the engraving, and yet not a single wall in Canina's reproduction can be identified with any of the surviving features visible today. The reason for this is that, with its winter floodwaters, the stream has constantly changed course, washing away some fresh part of the buildings every year. As the alignment of the Roman river-wall shows (fig. 2), the Valchetta's present position bears little relation to its course in antiquity.

In recent years little has been visible. Mr. Ward-Perkins records that a few years ago almost the only feature to be seen was the circular tank in the stream bed, the rest being hidden by the heavy undergrowth of the stream-bank. During the winter of 1958 much of this undergrowth was stripped clean by the stream; and since the remains exposed were clearly very vulnerable to further erosion, the British School asked permission, which was readily granted, to clear and clean the visible section of the building. To the owner of the Vacchereccia Estate, Marchese S. Ferrajoli, to Prof. Renato Bartoccini, Superintendent of Antiquities for Southern Etruria, and to Dott. Alfredo d'Agostino, Inspector for Veii within the Superintendency, are due the grateful thanks of the School and of the writer for permission to undertake the work and for many other courtesies received.¹

¹ The excavation was largely carried out by friends and residents of the School, in particular, Mrs. L. Murray Threipland, Mrs. J. Kahane and Mrs. Betty Eastwood. The Assistant Director, Mr. M. H. Ballance, kindly took some of the illustrations and the surveys are the work of Mrs. Ballance, Mr. J. Whewell, Mr. C. M. Daniels and myself. The

schist axe was kindly examined and identified by Professor Enrico Ablolito of the Rome University Institute of Mineralogy. Finally I owe a special debt of thanks to the Director, Mr. J. B. Ward-Perkins, who advised and encouraged the article throughout.

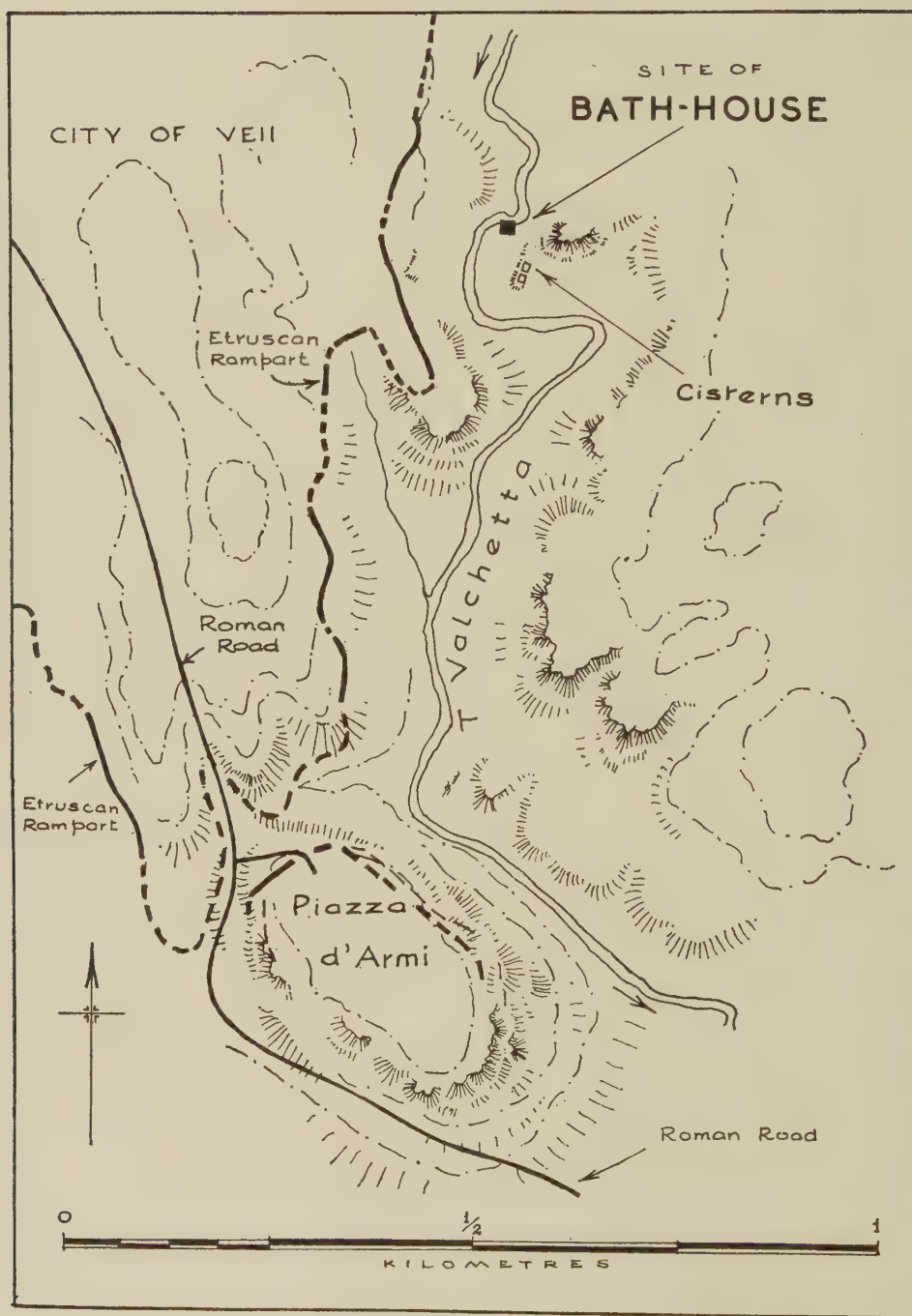


FIG. 1. THE SITE OF THE VALCHETTA BATHS

THE REMAINS

The site of the baths (Istituto Geografico Militare, 1 : 25,000, Sheet 'Formello,' 856556) lies along the northern side of a horseshoe bend which the Valchetta makes in the valley floor. The area that could be cleared was limited. The nature of the rescue-work meant that no excavation could be made in the field south of the river. The excavation was therefore confined to the clearance of the remains exposed along the south bank of the river over a length of 40 m. This revealed a complicated series of structures, some of which survived to a height of two and a half metres above the foundations. These included two hypocaust rooms, a stokehole and *prae-furnium*, and stairs and walls in *opus reticulatum*. The best-preserved unit was a *caldarium* with twin apsidal end-walls and hypocaust piers and wall-flues still in excellent condition. Altogether the structures that were uncovered form a complex group of buildings dating from the early Imperial period to the late empire. The buildings not exposed by erosion continued under the field to the south for at least 13 m.²

In the immediate neighbourhood there are several other features of antiquity, including a *cuniculus* and a series of rock-cut cisterns, which were probably associated with the baths in some way.

Of the *cuniculus* little can be said. It runs due east under the southern end of M. Tondo, but its entrance has been enclosed under a small pump-house supplying hot water from one of the springs to the casale at il Centro (861550).

In the area behind the baths a steep bluff runs from north-east to south-west across the field for approximately 60 m. In its face can be seen the entrances to two Roman rock-cut cisterns, one of which is too choked with earth to permit measurement. The other is rectangular in shape, 4.05 × 4.40 m., with an entrance 95 cm. wide. Both chambers were tufa cut and the sides were lined with fine *opus signinum*, most of which has now fallen from the walls. Towards the bath-house the face of the scarp has been buried by soil-slip, but there is space for at least five more cisterns to have been cut in the rock face.

The area occupied by the baths lies largely on a stratum of travertine formed beside the hot springs in the valley floor. As already emphasised, the course of the Valchetta has altered since the period when the baths were in use. Water-worn rocks and a silt-filled channel beyond the far side of the modern stream-bed show that the Valchetta then ran parallel to the river wall on a more northerly course than at present, as shown in fig. 2.

Downstream, where tufa forms the bed-rock, there are signs of ancient quarrying exposed in and along the stream bed. The rectangular marks remain where tufa blocks were quarried from the bed-rock. This method was common around Veii; examples of it occur by the falls on the Valchetta north of the Ponte Sodo and on the southern side of M. Tondo to the east of the baths. The instance in question was almost certainly used to supply building stone during the construction of the baths.

(i) *The River Wall* (pl. XX, b) (fig. 3)

The excavated remains may conveniently be described in order, starting from the south-western end where part of the river wall survives. Structurally it consists of a wall with both internal and external reticulate facing, resting on a socle of two courses of large tufa blocks, the lower of stretchers, the upper of headers. The *tufelli* used in the *opus reticulatum* are all a fairly consistent 8 × 8 cm. in shape; the tufa blocks are all heavily bossed. Between the blocks and the scarped face of the bed-rock there is a packing of small grit, which gives place higher up to a filling of

² This is known from an electrical resistivity survey kindly carried out in the area behind the excavations by Dr. T. Schwarz in October 1960.

The 'bridge' referred to on the 1 : 25,000 edition of the Istituto Geografico Militare map is in fact part of the river wall.

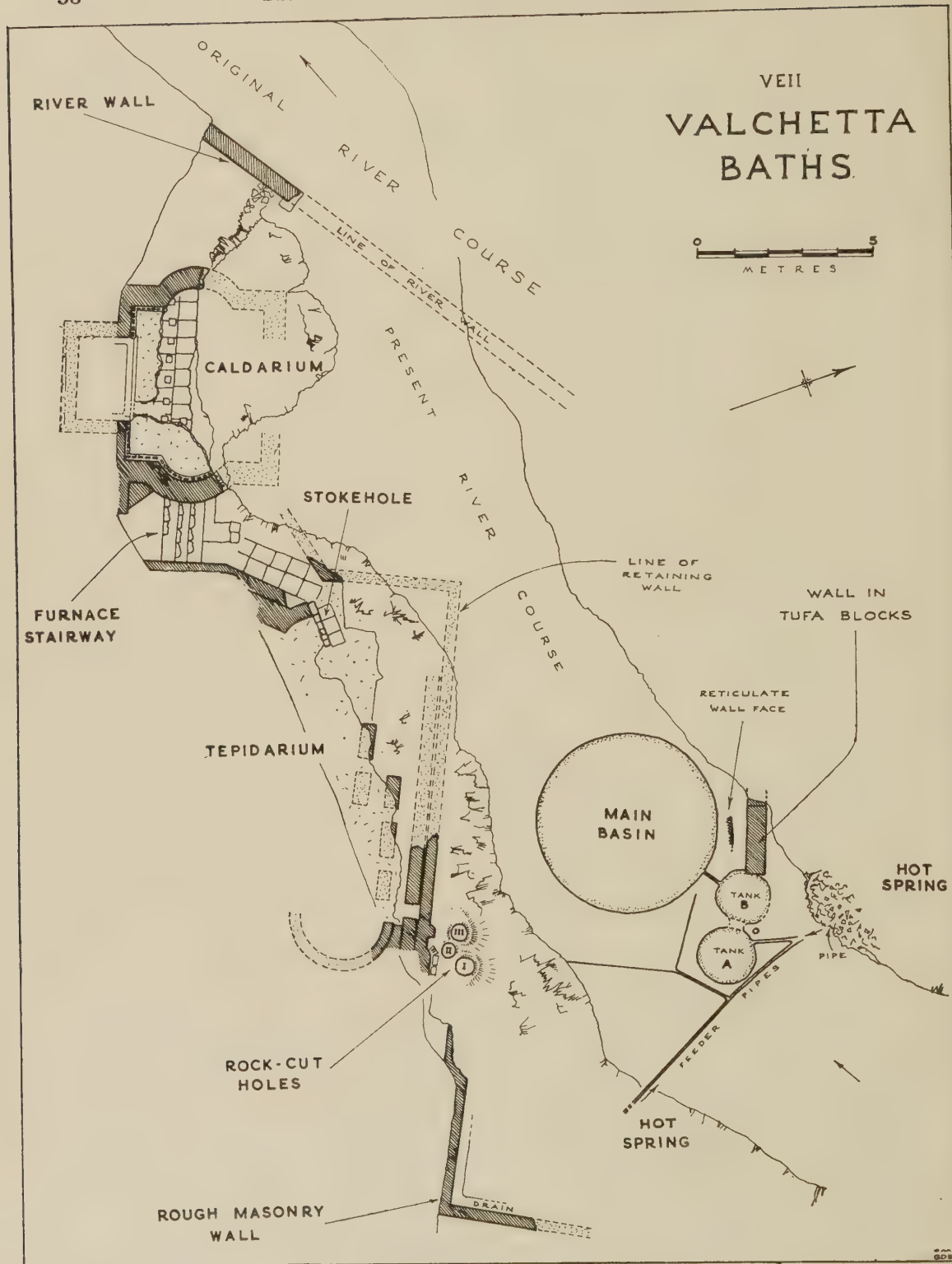


FIG. 2. AREA CLEARED AND SURVEYED IN 1959

tufa rubble and mortar. A construction level is visible in this packing 4 cm. below the top surviving course of the wall, and the last few centimetres are made of finer material. The unusual structural feature of the wall is the inner reticulate facing, which cannot ever have been exposed and was never meant to be so, as the bed-rock to the rear rises higher than the wall and the space was packed with filling.

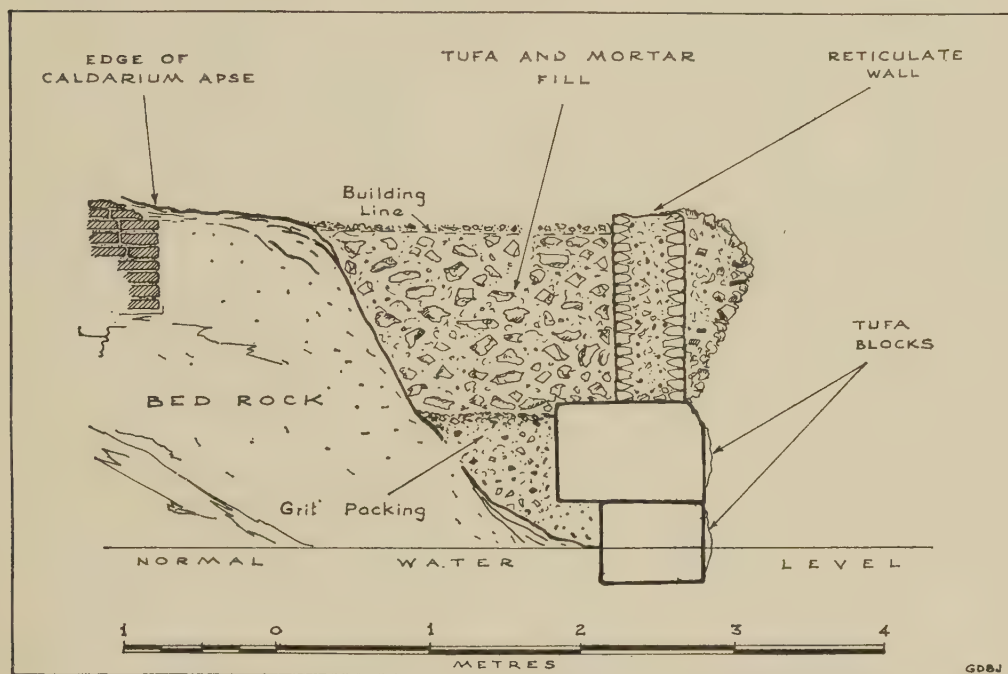


FIG. 3. SECTION THROUGH RIVER-WALL

This structure originally formed the river wall of the ancient stream. As shown in fig. 2 it is now cut by the present course of the Valchetta. In clearing part of the far bank a tufa block was found along the projected line of the wall, which must, therefore, have continued its known alignment for at least another 3 m.

(ii) *The Caldarium* (pl. XXI, *a* and *b*: figs. 4 and 5)

Four metres away from the river wall the rock has again been scarped to carry the foundation layers of the south-western apse of the *caldarium*, or hot room. This unit forms the most important single feature of those recorded, the details of its hypocaust arrangements being especially well preserved. Its heating system was of the familiar variety in which hot air from an external furnace was passed beneath the suspended floor through the space created by hypocaust piers, or *pilae*.

The surviving structure represents half the *caldarium* (6.50 m. in length) with twin apsidal ends and a hot plunge bath in the recessed south-eastern wall, the shape, in fact, of a typical 'Reihentyp' *caldarium*. Whether this was matched by a similar recess in the lost wall opposite cannot now be known, but it seems unlikely as that

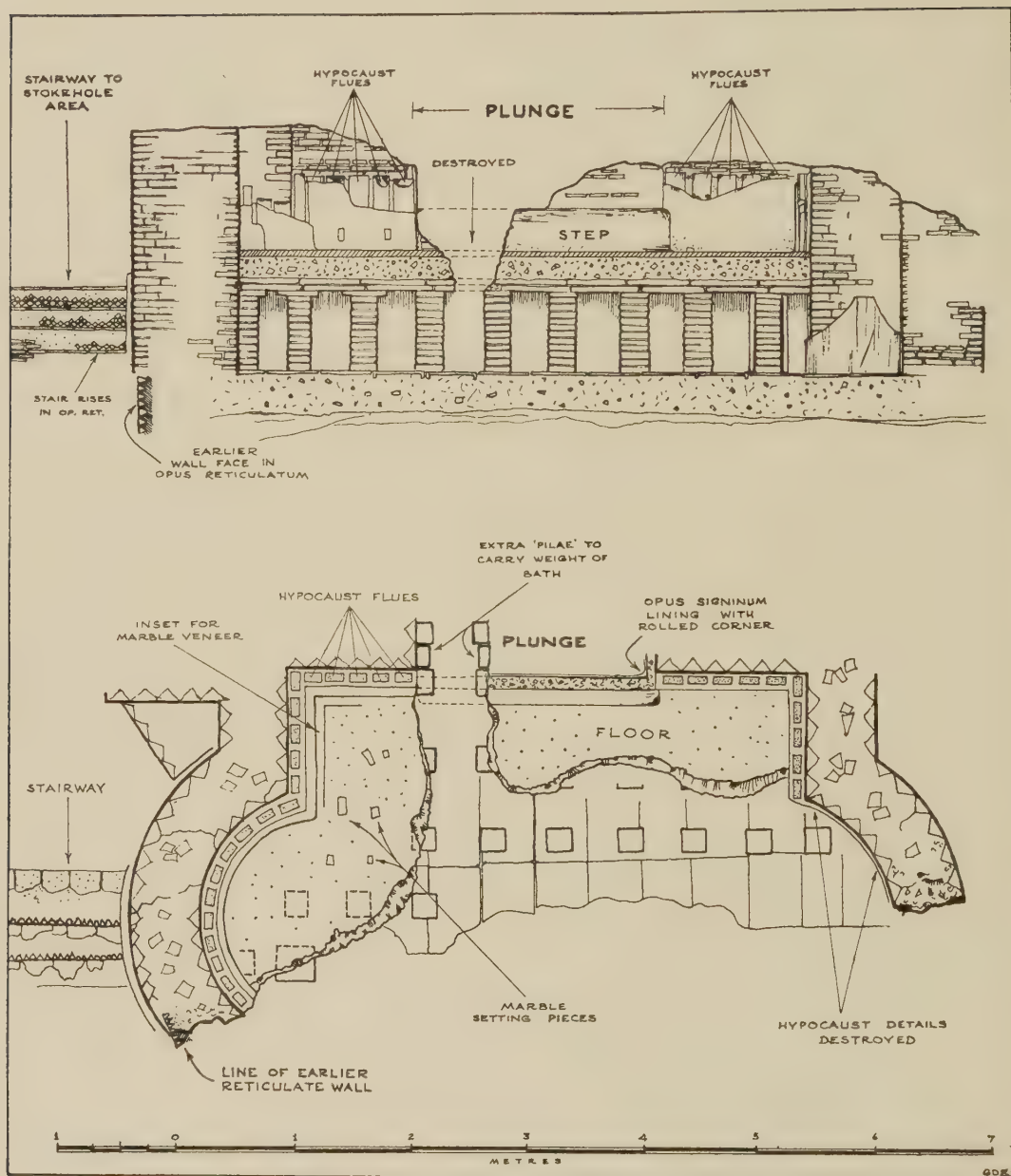


FIG. 4. Caldarium: SECTION AND PLAN

side must have contained the entrance. To support the extra weight of the bath-tank some sort of reinforcement was necessary and often took the form of elongated stokehole flues under the bath,³ any loss of direct heat being compensated by use of the *testudo* boiler.⁴ In this instance, however, there is no sign that the stokehole

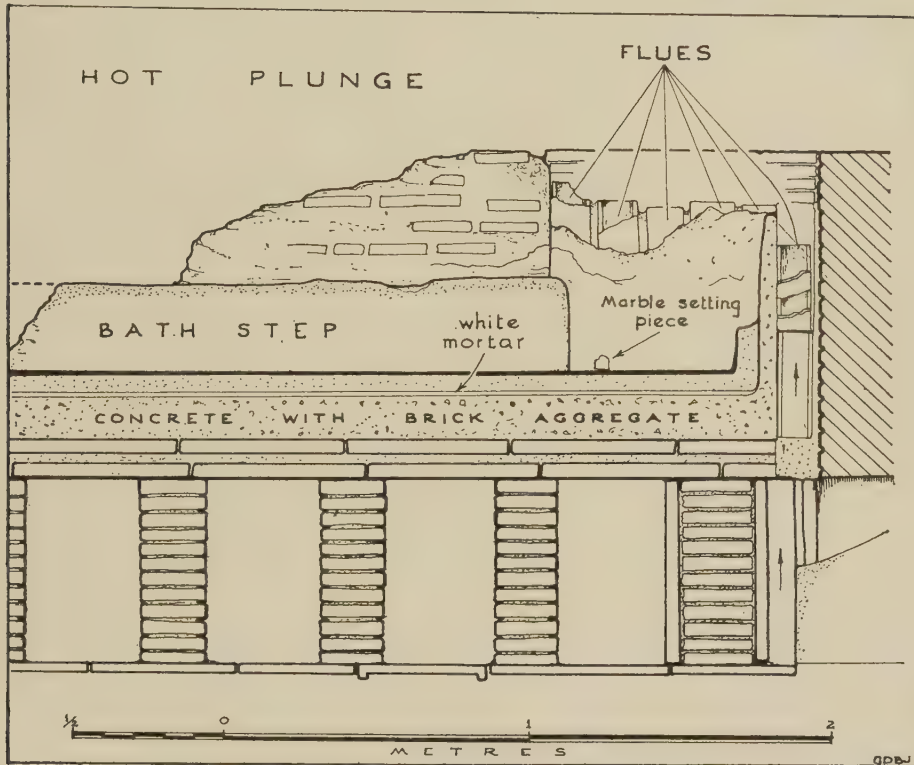


FIG. 5. *Caldarium*: DETAIL OF WEST SIDE

flues were elongated in this way, and instead the normal number of hypocaust *pilae* was doubled in the area beneath the bath-tank. Unfortunately the furnace itself lay in the unexcavated area and none of its details could be recorded.

The hypocaust foundations were made up of the two layers of rough concrete on which the outside walls also were laid. The hypocaust sub-floor was paved with roofing tiles (*tegulae*) measuring 60×45 cm.;⁵ most were laid with their flanges chipped away. The base of the suspended floor stood 60 cm. above the sub-floor, carried (on the outer section shown in fig. 4) on nine brick pillars (*pilae*) constructed with $20 \times 21 \times 4$ cm. or $22 \times 21 \times 4\frac{1}{2}$ cm. tiles. No brick stamps were found on the tiles. The end piers of the series were flanked on one or both sides by paving slabs. The thickness of the mortar joints varies from one to four centimetres. Resting on the *pilae* were two layers of *bipedales* ($55 \times 55 \times 5$ cm.) separated by a thin (4 cm.) layer of mortar.⁶

³ Examples of this have been found at Stockstadt, Wörth, Gellygaer and Corbridge; v. C. M. Daniels, 'The Roman Baths at Red House, Corbridge,' *Archaeologia Aeliana*, xxxvii, p. 85 ff.

⁴ For the principle of this ingenious heating system, v. *Archaeologia*, 93, 1949, p. 177.

⁵ *Suspensurae caldarium ita sunt faciundae ut*

primum sesquipedalibus tegulis solum sternatur (Vitruvius, V.10.2).

⁶ All the dimensions are very close to those given by Vitruvius (*loc. cit.*): *supraque laterculis basalibus pilae struantur ita dispositae, uti bipedales tegulae possint supra esse conlocatae; altitudinem autem pilae habent pedes duo.*

These were overlaid by 15 cm. of concrete and brick aggregate, part of which was continued upwards as a lining for the hypocaust box flues. This was then covered by a 3 cm. skin-coat of fine white mortar; above it lay another 8 cm. mortar layer in which a floor of marble paving blocks had been set. The blocks themselves have disappeared; only their matrices remain, together with a few waste marble chips placed in the mortar to act as setting pieces. Similar setting pieces were found also in the walls on either side of the plunge bath and show that the marble slabs were also carried upwards as a wall lining.

After circulating beneath the floors the heat from the furnace was conducted up the walls by a jacketing of box flue-tiles (*tubuli*) measuring $36 \times 14 \times 12$ cm. These *tubuli* were of the normal open-ended variety and were best preserved in the eastern corner and apse, where their cement lining was largely intact. They were attached to all the surviving inner faces of the room, including the walls of the bath-recess, and coated with two thin layers of light grey cement. The sides of the bath itself (2.70 m. across) were set against this plaster coating and were contained, on the side facing into the room, by a 24 cm. brick wall with a 32 cm. step projecting into the room area. The final rendering of the bath itself was a layer of fine cream-coloured *opus signinum*, with rolled corners.⁷ When finally cleared, it was found that the soil immediately overlying the building was heavily discoloured with yellow matter, presumably from the springs nearby.

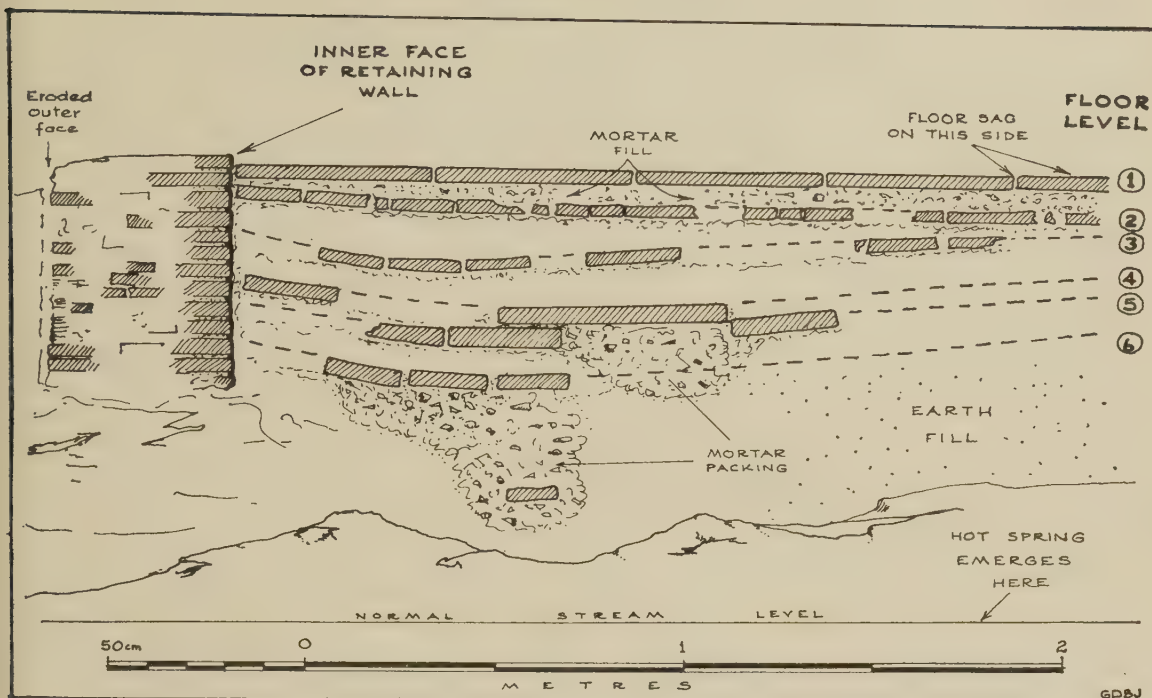
The exterior was finished in good-quality brickwork coated with a 2–3 cm. layer of grey plaster. The wall core contained much re-used material, while the face itself was executed in triangular brick with average measurements of $23 \times 17 \times 17$ cm. Sufficient of the structure survives for its various building phases to be identified. It was not built as an integrated unit, but piece by piece, with very varied standards of execution. The exterior brick shell was built in one piece, with excellently pointed brickwork. Inside this the hypocaust sub-floor was badly laid out, with inaccurately spaced *pilae* and rows of tiles set out of the true alignment. The hypocaust flue system was next attached to the inner face of the wall, irrespective of the fact that at a later constructional stage this would prevent the dwarf wall containing the hot plunge bath from being bonded into the main shell.

The *caldarium* is important for dating purposes. A few fragments of Red Polished ware ('*terra sigillata chiara*') found in the structure of the eastern corner confirm, as one would expect from the brickwork, that the building belongs at earliest to the second century A.D. It was not, however, the first building on the site. A wall face in *opus reticulatum* which appears below the sub-floor shows that the present structure overlaid an earlier building (v. fig. 4) which, from its similarity of construction, is probably contemporary with the river wall. The full significance of this dating evidence is discussed in a later section (p. 69).

(iii) *The Praefurnium Area* (pl. XXII, a; fig. 6)

The entrance to the *praefurnium* lay down a flight of steps leading from the area behind the eastern apse of the *caldarium* and connected, in all probability, with the area of the *caldarium* stokehole. The four steps of the stairway were paved with $44 \times 44 \times 4$ cm. tiles, whose outer edges had been broken and cracked in antiquity. The stair rises were made of *tufelli* (av. size 11 cm. $\times$ 11 cm.) set in *opus reticulatum*. The stairway led down to the *praefurnium* proper, an elongated rectangular area, measuring at least 5×2.50 m. and paved, in its final form, with $60 \times 60 \times 4$ cm. flagstones set at a slight angle to the brick wall flanking the room's northern side. If it ever had a roof, it was probably one of the lean-to variety set against this wall, which is itself of interest because it shows two structural phases. Courses of thin well-laid bricks (five courses measure 25 cm. in height) carry the wall to a height of 1.12 m.; beside the stairway this wall is overlaid by another, 87 cm. wide and 1.07 m. high. Its brickwork is later and much coarser in style, consisting of alternating double courses of tile and thick (9 cm.) brick. Both walls were found

⁷ These features have been destroyed at one point by a 75 cm. robber trench.

FIG. 6. *Praefurnium*: SECTION THROUGH COLLAPSED FLOORS

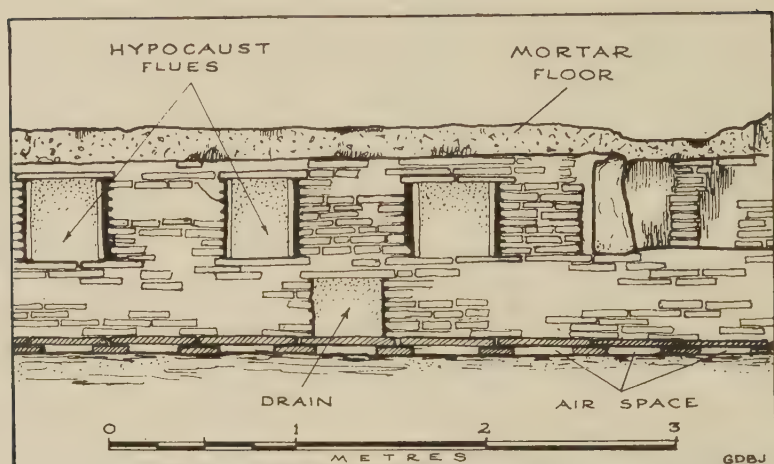
covered by a thin, light brown plaster. Without further excavation these features remain unexplained. That structural relationships were complex in this area is shown by a small collapse in this wall, which has revealed the bonded junction of two other walls running at slightly different angles behind it and belonging to the *tepidarium*.

The *praefurnium* floor has an interesting history. Beneath the uppermost paving tiles lie no fewer than five other floor-levels, all of which had subsided during the period when the stokehole area was in use (fig. 6). The cause of this was a small hot spring issuing from the rock directly below the *praefurnium*. Periodically this had undermined the substructure, and in each case the amount of mortar and aggregate packing proved insufficient to prevent the subsequent collapse of the later floor-levels.

The only furnace investigated was that which served the *tepidarium*. This lay at the north-eastern end of the *praefurnium*, where the firebox communicated with the hypocaust chamber through a 1.32 m. gap. Only the north-eastern side of the stokehole survives, but the whole can readily be reconstructed. The channel, or flue, was approximately 48 cm. wide and paved with three 44 cm. square tiles. On the north-eastern side the tile courses stand to a height of 58 cm., cracked and discoloured by contact with the heat. The entrance was flanked by two upright tufa blocks, of which one (38 cm. high) is still in position. The roof was formed by a tile arch, of which the first three courses of the springing survive at the mouth of the stokehole (pl. XXII, *b*). There was no evidence of long use. The flue belonged to one period only, and the firebox had not been re-lined.

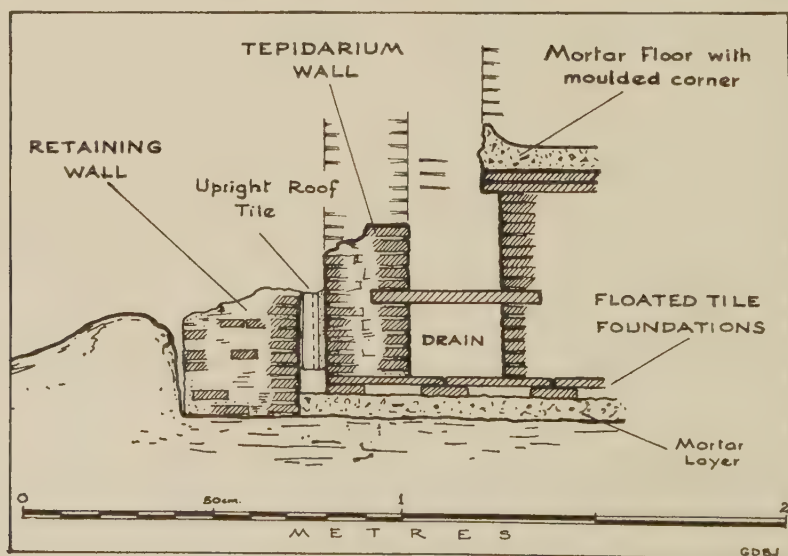
(iv) *The Tepidarium* (pl. XXII, *b, c*; figs 7, 8)

Although almost all of one side has been washed away and few distinctive features remain, the structure lying next to the *praefurnium* area may conveniently be identified as a *tepidarium*. In shape it consisted of a rectangle (9.40 m. long) with two apsidal recesses in the shorter sides. The section exposed by the river ran through the centre of the room and the surviving structures consist almost entirely

FIG. 7. *Tepidarium*: SECTION THROUGH HYPOCAUST SYSTEM

of the hypocaust substructure, floor and drains. The respond and buttress of the north-eastern apse were, however, also uncovered, and the apse itself probably contained a semi-circular plunge-bath. At this end, the room is tolerably well preserved up to the level of the suspended floor; on the opposite side only the sub-floor survives, but the arrangement of hypocaust *pilae* strongly suggests that there was a corresponding bath in this apse too (pl. XXII, c). It lay directly over the inner end of the stokehole flue, and the water temperature would have been proportionally higher than at the opposite end of the *tepidarium*.

The suspended floor is not supported in the usual way by *pilae*, but by rectangular brickwork piers measuring 92×48 cm. in plan. These were intersected on the lower level by drains measuring

FIG. 8. *Tepidarium*: SECTION THROUGH EAST CORNER

38 × 40 cm. and, on the upper level, under the concrete floor, by hypocaust flues (34 × 56 cm.) lined with upright paving slabs. The weight of this unusual hypocaust system was carried on a carefully planned arrangement whereby the whole *tepidarium* sub-floor was floated on tiles to prevent undermining by seepage (fig. 7). The area was always liable to subsidence from springs nearby and the problem was countered in an ingenious way. The bed-rock was overlaid with a mixture of mortar and small tufa rubble. On this was laid out a square grid of 16 cm. sq. tiles, set at approximately 57 cm. intervals. These formed the piers on which rested large (57 × 57 × 5 cm.) roofing tiles carrying the drainage and hypocaust system and, above them, the *tepidarium* floor itself. Thus the whole of this substructure was separated from the bed-rock by a 5–6 cm. air-space to counter the danger from seepage.

The same care in protecting walls against damp is shown at the east corner of the building, where the hypocaust system was set against the retaining wall of the *tepidarium* area, as illustrated in fig. 8 and pl. XXIII, *a*. This wall only survives for a little over a metre at this point, but its shallow foundation trench cut in the bed-rock can be traced running along the outside edge of the *tepidarium* back towards the *prae-furnium* area, where another short length is preserved close to the mouth of the stokehole. The wall is built of triangular bricks and its well pointed inner face makes it very probable that the wall itself belongs to an earlier date than the hypocaust built against it. The care with which the two structures were joined is interesting. The retaining wall was presumably always subject to dampness from its proximity to the circular basins; accordingly, to create a dry face against which to set the side of the hypocaust system, a row of upright tiles (*tegulae*) were set with their flanges against the side of the retaining wall, in much the same way that so-called *tegulae mammatae* were employed. The hypocaust piers were then laid against the mortar backing of the *tegulae*, so creating an air-space between the retaining wall and the side wall of the *tepidarium*. The principle is that of Vitruvius, who advocates the use of tiles set on end to form an air cavity, so as to preserve from dampness the stucco on which mural decorations were painted.⁸

(v) *Pre-Bath Features* (pl. XXIV, *b*; fig. 9)

The earliest feature exposed was a group of three holes set in the rock immediately beyond the north-east end of the *tepidarium* (pl. XXIV, *b*). The holes lie close together and were entirely overlaid by a row of three tufa blocks, set in mortar

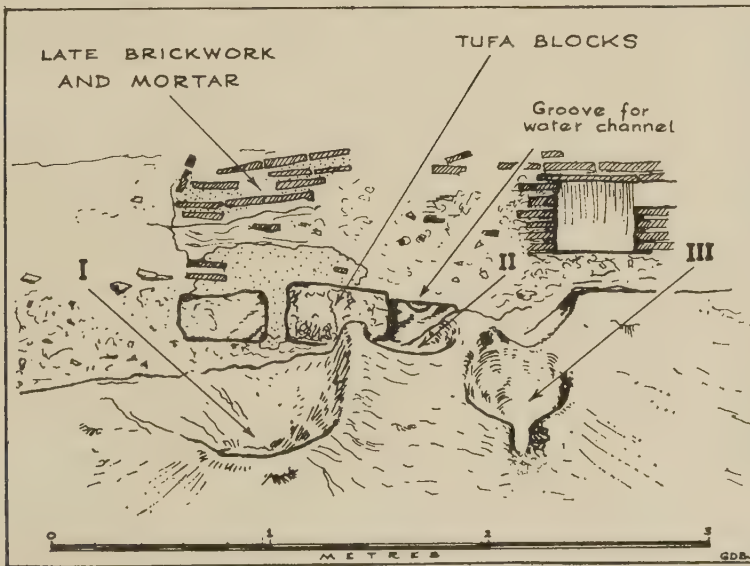


FIG. 9. EARLY ROCK-CUT HOLES OVERLAID BY BATH MASONRY

⁸ Vitruvius, VII.4.2: *deinde insuper erectae hamatae tegulae ab imo ad summam ad parietem figantur, quarum interiores partes curiosius plicantur ut ab se respuant liquorem*. The text is not certain, and *mammatae*, supplied from Pliny, *N.H.* XXXV, 159, is often read for *hamatae*.

and belonging to a later date. In making a footing for this line of blocks, Hole II, the highest of the group, had been partly cut away, while the others had been sealed off with a filling of coarse mortar in which the tufa blocks were set. The precise function of the blocks is obscure, but one can at least be certain that water played some part in it, as the end block of the series on the *tepidarium* side contains a shallow, 12 cm. wide groove for a water channel. Later this feature was itself superseded; at a third and last stage the whole was overlaid by brickwork of the same style and size as that found in the *tepidarium*. Little of this now survives in position, because the brick courses have been warped and twisted by tree roots.

Interest mainly centres on the earliest feature, the three holes cut in the bed tufa. Holes I and II are both shallow bowls and the upper edge of the latter has



FIG. 10. ETRUSCAN BROOCH

been destroyed to make way for the line of tufa blocks which overlaid it. Hole III is more complicated. It is ovoid in shape (40 × 44 cm.) and at 56 cm. divides into two separate shafts which have an overall depth of *c.* 96 cm.⁹ Subsequently, in the second of the periods identified, all the holes were filled with mixed mortar and aggregate similar to that used in binding the row of the tufa blocks above.

Fortunately a valuable dating clue came to light when an Etruscan bronze brooch (5.4 cm. long) and a greenstone axehead were found lodged on a ledge inside the hole where they had been sealed by mortar. The brooch (fig. 10) belongs to the family of leech-shaped (*mignatta*) fibulae with long feet. Beginning in the late eighth century, they become common in central Italy in the seventh and probably survive into the sixth.¹⁰ The axe (pl. XXV, *a, b*) is made of dark green, epidosite schist, of a type common in the mountainous regions of central Italy. These chance finds enable the earliest features to be dated in general terms, and show that the site had been frequented at least since Etruscan times.

(vi) *The Circular Basins* (pl. XXIV, *a*; fig. 2)

One of the most interesting features that was found in the baths was a series of open chambers and basins submerged in the present stream bed. The system was designed to utilise the water from two hot springs, which lie partly buried on either side of the stream. When the water level drops in the summer months the water channels can be traced fairly clearly. They tap two springs, one buried in the south-eastern river bank, the other still visible to the north-west of the stream,

⁹ All measurements are taken from the upper edge of the hole.

¹⁰ Cf. R. McIver, *Villanovans and Early Etruscans*,

fig. 48, p. 136; J. Sundwall, *Ältere Italischen Fibeln*, 1943, pp. 50, 198f.

where it was contained by mortar and rubble on its lower side. The water in these channels flowed, either directly, or via two smaller tanks, into a large (4.80 m. diameter) circular tank which lies submerged in the present stream-bed.

The two springs are now separated by the river bed, but were originally linked by a narrow channel of which 6.80 m. can still be traced below water level. At 4.90 m. from the eastern bank a short (1.80 m.) duct tapped this main pipe and carried water directly towards the main tank. A second open pipe also carried part of the water from the spring on the north-western bank indirectly into the main basin by way of two smaller basins (A and B on fig. 2) with diameters of 1.70 and 1.40 m. respectively. Much of the detail has been washed away but it is clear that the overflow from Basin B ran into the main tank. This feature, which is now largely filled with silt, is a slightly irregular circle in shape (diameter *c.* 4.80 m.) cut into the bed tufa to a depth of 58 cm. On the north-eastern side the rock has been chipped smooth alongside the basin, while to the north, a fragment of reticulate wall facing (marked in fig. 2) appears to represent part of an encircling wall contemporary with the tank itself. Beyond this again is exposed a course of a wall in massive tufa blocks (1.95 × 0.85 m.) and a stone of similar dimensions lies where it has been washed a few metres downstream. This might well have been another part of the original outer wall of the baths.

The main feature, the large circular basin, is noteworthy because there seems to have been a somewhat similar use of hot springs in the meadows near the foot of the Vignacce valley.¹¹ The example there was a circular basin of approximately 2.80 m. diameter and, when it was seen in the last century before being completely filled in by cultivation it appeared to have two internal steps. Although there is nothing to suggest that the Vignacce basin ever had a roof or that it was part of a larger complex, the short length of reticulate wall beside the basin in the Valchetta suggests that in this case the area was originally enclosed and perhaps roofed. The interest of these features lies in their possible relationship to some of the circular bath units that are found at Pompeii. For all their greater architectural elaboration the *frigidarium* of the Terme Stabiane and, more particularly, the separate *frigidarium* unit of the small baths in Regio VIII, Insula 5, are both circular stepped basins of the same basic pattern.¹²

(vii) *Other Structures* (fig. 2)

The north-east corner beyond the rock-cut holes described above (p. 66) is occupied by a wall which runs for 4.88 m. and then turns at right-angles towards the river. The first 3.08 m. consist of a wall 82 cm. wide built with rough, hand-sized *tufelli* and mortar set on lower courses of tufa blocks. The outer face nowhere survives, but a 3 cm. plaster rendering covered the inner side of the wall. At 1.05 m. the wall was pierced by a drain made by placing two tiles together in the shape of an inverted V. At 3.08 m. a structural break occurs and the line is then continued for another 1.80 m. by a wall constructed with large, badly-dressed tufa blocks, tile and mortar; the masonry certainly appears later than that of the adjoining structure. The line then turned at right-angles towards the river; the wall itself survives for 2.30 m. and the footings have been traced onwards for a further 2.60 m. An open drainage channel, 45 cm. wide and cut into the bed tufa to a depth of *c.* 25 cm., ran beside this section of the wall, turned the corner and may have run into the drain already described.

¹¹ Gerhard *ap.* Gell, *Memorie dell'Istituto di* *Correspondenza Archeologica*, i, 1832, p. 24, item C.

tav. XVII; for the small baths of Insula VIII v. *Not. Scav.* 1950, pp. 116-136.

¹² Terme Stabiane: for plan v. *Not. Scav.* 1931,

Without further structural evidence, it is impossible to decide what function these features served. They may only have been intended as a retaining wall set into the hillside; but the shape does not support this theory, and the drain may perhaps signify that the area in question was once a latrine.

STRUCTURE AND DATE

Considered as a whole, the bath unit was quite ambitious in scope in comparison with the small *municipium* which it served, but it is clear that the architects or builders made no attempt to produce an overall uniform plan. The buildings themselves were built with a strange mixture of carelessness and attention to detail. The way in which no real precaution was taken to prevent the collapse of successive floors behind the *tepidarium* stokehole stands in marked contrast, for instance, to the carefully planned system whereby the whole *tepidarium* sub-floor was 'floated' on tiles to prevent undermining by seepage (p. 65).

Only a small area of the bath buildings was available for examination. It is hardly surprising, therefore, that it is not easy to arrive at any precise chronology, particularly as the action of the stream had stripped the site of what little pottery evidence there may once have been. As the detailed description has shown, there are a number of points where several structural periods were identified, but these for the most part can only be dated in the most general terms.

Of the whole group of structures the features most susceptible to dating are the walls in *opus reticulatum*, which belong to the period of the baths' foundation. Altogether there are four instances of its use, in the wall beside the largest of the circular basins in the river bed, in the rises of the *praefurnium* steps, in the early wall overlaid by the *caldarium* sub-floor, and in the river wall. The features associated with this reticulate work, the circular basins, the undetermined building overlaid by the *caldarium* and the general lay-out of the baths as imposed by the line of the river wall, may all be assigned to this earliest phase of the site's history. In dating it, the evidence of the *opus reticulatum* itself is important. In the four available examples the *tufelli* are all of local reddish-brown stone, are regularly cut and have almost uniform measurements. Those below the *caldarium* measure 10×10 cm., while the three other instances are all a consistent 8×8 cm. square. In buildings at Rome, the size of the *tufelli* used in *opus reticulatum* underwent a number of changes from its first known appearance in the Theatre of Pompey (55 B.C.) to its combination with brickwork in the post-Tiberian period. Very small *tufelli* (5–6.5 cm.) predominate in the late Republican or early Augustan epoch; during the reign of Augustus, a general increase in size is apparent; and by the time of Tiberius, the average measurements were usually 8–10 cm.¹³ According to this argument, therefore, the baths' foundation would belong to the late Augustan or Tiberian period. This is open to the criticism that the changes known in the size of reticulate facing were limited to Rome proper. While this may be true for Italy in general, there is a good case for thinking that the immediate neighbourhood of Rome reflected the trends of the capital fairly closely. Near Veii, for instance, the

¹³ The evidence for these conclusions is set out in detail in M. E. Blake, *Ancient Roman Construction in Italy from the Prehistoric Period to Augustus*, pp. 253–275 (esp. p. 274), and G. Lugli, *La Tecnica Edilizia Romana*, i, p. 506.

reticulate facing of the Villa of Livia at Prima Porta is a generally uniform 8×8 cm. More important, because it represents an example of purely domestic architecture, is a villa at Km. 10 on the Via Cassia, dated to the Tiberian period, where the *opus reticulatum* was a very regular 10×10 cm.¹⁴

The suggested late Augustan or Tiberian date would agree well with the historical evidence. However artificial the Augustan recognition of Veii as a *municipium* (not later than 2 B.C.) may have been, Julio-Claudian inscriptions make it clear that the period which followed saw the erection of a number of new public buildings, amongst which a new municipal bath-house could well have been included. The parallel to this lies close at hand in the Ager Capenas, where the small town of Lucus Feroniae shows a similar increase in building activity during the Julio-Claudian period.¹⁵

The two arguments, one from the municipal building expansion and the other from the size of the reticulate facing, support each other. Both point to a Julio-Claudian date, probably during the late Augustan or Tiberian period, for the foundation of the baths. The substantial modifications which the buildings later underwent must have been executed before the *municipium* of Veii ceased to be an effective body. Of these later structures the only one that can be dated at all closely is the *caldarium*. A few abraded sherds of 'terra sigillata chiara' were found at one point in the plaster coating of the hypocaust *tubuli*. As far as present knowledge of this ware goes, in Italian contexts it is post-Trajanic in date.¹⁶ On the other hand, the brickwork (five courses measure 24 cm. in height) is unlikely to be post-Severan. Between these two termini, an Antonine date is perhaps the likeliest for the construction of the building.

The large-scale reconstruction to which the building of the *caldarium* belonged presumably reflects a change of taste. In their initial phase, there is no evidence to show that the baths had any independent heating arrangements; they relied on the supply of hot water from the springs over which they were built. With the development of the hypocaust system and the higher water-temperatures which it could produce, the use of natural heating would soon become outdated and inadequate to meet changing public taste, in much the same way that the natural hot springs near Civitavecchia were replaced in function by the Trajanic *Thermae Taurinae*.¹⁷ The same demand for better heating arrangements probably prompted the large-scale rebuilding of the baths at Veii. Viewed in this light, these alterations may, therefore, reflect the sort of change that is known in much greater detail at the Terme Stabiane where the original, non-heated baths were gradually converted into a fully-heated thermal establishment.

Given the limited nature of the excavations, the results are proportionally small. The main purpose of this article is to preserve a record of the bath features that will soon be washed away. These form only a small part of a much larger whole, which one day would repay further excavation.

G. D. B. JONES

¹⁴ *PBSR*, xxvii, 1959, pp. 131–155 (esp. p. 154).

¹⁵ For Veii, v. J. B. Ward-Perkins' article in the next volume of these *Papers*. Pending the full publication of Lucus Feroniae, there is a provisional description of the site by R. Bartoccini,

Atti del VII Congresso Internazionale di Archeologia Classica, Roma, 1958.

¹⁶ N. Lamboglia, *Rivista di Studi Liguri*, vii, 1941, pp. 7–22 and xxiv, 1958, pp. 257–330, esp. p. 295.

¹⁷ *Not. Scav.* 1933, pp. 398–421.

THE WEST CHURCH AT APOLLONIA IN CYRENAICA

(Pls. XXVI—XXXIII)

APOLLONIA in Cyrenaica was founded by the Greeks as the port for the city of Cyrene, from which it is some 20 km. distant. In the Roman period its prosperity was such that it received autonomy and became one of the five cities of the Pentapolis; by the sixth century A.D. it had surpassed both Cyrene and Ptolemais in importance. Christian sources more commonly refer to Apollonia as 'Sozusa,' and it is from this Christian designation that the present Arab name of 'Susa' is derived.

Witness to Apollonia's flourishing Christian life are its extensive Byzantine remains. Among these figure at least four churches, three of which have now been excavated, and what is probably the palace of the governor of the Pentapolis himself, the most recent structure to have been uncovered.¹ What follows is a report on the 'West' Church excavated by the Department of Antiquities of the Provincial Government of Cyrenaica during the spring, summer, and fall of 1958 and again in the spring and summer of 1959.² The consolidation and reconstruction of the church were begun simultaneously with the excavation and are still in progress.

The West Church at Apollonia was first plotted by the Beecheys in 1821–1822.³ In their plan of Apollonia the church appears with a quite extensive forecomplex. Intervening time plus in some places an overlay of small Italian buildings completely obscured the outlines of the church and caused the forecomplex to disappear from view altogether. Yet excavation of the site has proved the Beecheys essentially correct.

The term 'forecomplex' calls for a word of explanation. It would seem that a substantial portion of what constituted a Roman structure on the site was either destroyed or, if ruinous, cleared away to make room for the church. It was the eastern portion of this Roman building which was kept intact and which, in effect if not intent, became a forecomplex for the church. There can be no doubt as to its secular use prior to its partial destruction. But presumably at the same time as the erection of the church the preserved eastern portion underwent certain alterations necessary to accommodate at least sections of it to religious functions. Only later was a major rebuilding accomplished which, however radical, in no way changed its already established Christian character.

¹ Richard Goodchild, 'A Byzantine Palace at Apollonia,' *Antiquity*, xxxiv, 1960, pp. 246–258.

² Concerning the authors of this report: Mr. Richard Goodchild, as Director of the Department of Antiquities, oversaw the entire operation; Mr. Widrig assisted during the summer of 1958 and was in charge of the sorting out process the following summer. Mr. Widrig's presence in Libya was in part financed by New York University directly and also by the Phyllis Lambert Architectural Research

Fund of New York University. The original architectural survey and plans were done by A. Abdussaid of the Department of Antiquities. They have been prepared for publication by Aurelio Tassinari. Fig. 1 was drawn by Philip Oliver-Smith.

³ F. W. and H. W. Beechey, *Proceedings of the Expedition to Explore the Northern Coast of Africa from Tripoly Eastward*, London, 1828.

For the sake of convenience the church will be separated from the forecomplex in the ensuing discussion. But it should be remembered that from the time of its creation as a forecomplex (*i.e.* the construction of the church) and its presumed simultaneous modification it was functionally an integral part of the church itself.

I. THE CHURCH

The church is bounded on the west by the Hellenistic defence wall of the city. This was the only unalterable line that the Christian builders had to contend with, but it may account for the fact the church is unoriented. In plan it consists of a broad nave separated from side aisles by colonnades, on the west a single external apse, and on the east a porch (no narthex) flanked by rooms which are extensions of the side aisles. Although the flanking rooms are deeper than the porch, this difference is made up at the expense of the side aisles; hence the eastern alignment of porch and flanking rooms is the same. All of these elements are of the same build, despite the fact their intersecting walls do not always bond. Along the west and the north older (Hellenistic and Roman period) walls are incorporated into the fabric, and this accounts for some irregularities in plan. Of a different build, but probably very close in time, is a series of two rooms, one a kind of antechamber for the other, adjoining in parallel fashion the western limits of the left side aisle. Perhaps before the church ceased to function as such, a stone staircase was built up laterally against the north wall of the right side aisle at its west end; however, a certain construction date cannot properly be assigned to this feature.⁴ Related to the staircase and therefore of the same period is a wall cutting across and closing off the western section of the right side aisle just in front of the lower stairs. Also of uncertain date, but on the basis of masonry technique very late, are three or possibly four walls external to the church, all perpendicular to the north wall of the right side aisle and extending outward from it without any sort of bond. This area has not been excavated, and the significance of these walls remains unknown.⁵

The Arab invasion does not seem to have destroyed the fabric of the church beyond the stage of reasonable restoration. It does appear, however, to have ended its religious use, for the latest additions indicate secularisation as well as repair.⁶ The new work is technically close enough to that of the Christian builders to indicate that not many years elapsed before secular occupancy of the structure began. Perhaps it now served as an Arab barracks or even a stable. From their function

⁴ The staircase seems to lead not to an upper level of the church but to a once-existing platform set into the Hellenistic defence wall of the city. There would be more need for a strengthening of defences, before rather than after the Arab invasion, and from this it may be assumed that the staircase is Christian in date.

⁵ Conceivably these walls might relate to the strengthening of defences mentioned in footnote 4, on the other hand, since they interrupt a well-defined corridor giving direct access to those sections of the forecomplex which have a specifically religious function, they may well belong to the post-Christian or Arab period, when secularisation of

church and forecomplex eliminated the ritual need for intercommunication.

⁶ Raids by desert tribesmen might necessitate repair to the church, but would not result in its secular conversion. The Arab invasion of A.D. 642 certainly destroyed the urban organization of Cyrenaica, Barka (El-Merj) becoming the new capital in place of Apollonia. The 'Central' and 'East' churches of Apollonia were deliberately destroyed, as can be seen from the undercutting of their columns; and nowhere in Cyrenaica is there evidence to suggest that the ritual observance of Christianity was allowed to continue into the Arab period.

and also building technique the following features can be assigned to this post-Christian period: a circular water basin of crude rubble concrete and a sandstone block with drainage troughs cut on its upper surface, both of these fitted against the north wall of the right side aisle; a short rubble wall perpendicular to and abutting on the staircase in the right side aisle (this wall has now been removed); a thick, unbonded, transverse wall of squared sandstone blocks with a narrow centre passageway in the room flanking the porch at the east end of the right side aisle;⁷ a rubble bench along the midsection of the south wall of the left side aisle; an unbonded, transverse wall of reused, large, sandstone blocks, a single block thick, so placed as to form a separate room of the eastern extremity of the left side aisle;⁸ rubble fill in all but one of the openings in the left colonnade west of the above transverse wall, in this way making a long narrow room of the remaining portion of the left side aisle; a low transverse arch in the room flanking the porch and once the eastern extension of the left side aisle;⁹ a stile-like blocking of the main entrance from the porch into the nave; and a two-faced wall of squared sandstone blocks filling the northern opening in the porch colonnade.

It is quite possible that the roof of the nave fell as a result of the Arab invasion and that it was never replaced, thus creating an open courtyard of the nave area. This hypothesis is supported on two counts: first, there is evidence that the eastern part of the church was involved in a reroofing scheme at the time of conversion (footnotes 7 and 9), but this reroofing does not seem to apply to the nave; second, the preservation of specifically Christian fittings almost exclusively in the nave suggests that this area was used as a dump during conversion and later, a treatment which is reasonable only if it were open, and so remained.

Nave, Side Aisles, and Apse. The nave of the church measures some 28×9.5 m.; the side aisles taken together (the right aisle tends to be wider than the left) add about 8 m. to the span of the nave.¹⁰ On the east both aisles are 2 m. shorter than the nave; due to discontinuous west walls the right side aisle is shorter again by 1.5 m. The nave is separated from the side aisles by two colonnades, each of seven columns spaced at 2.25-m. intervals (from column centre to column centre). The western respond walls, composed of two faces of squared sandstone blocks and unbonded with the west walls of either nave or side aisles, extend 7 m. into the nave and delineate the chancel area; they have centre doorways marked by orthostates connecting aisles and chancel. The eastern respond walls, again of squared-sandstone-block faces, are each about 4.5 m., disregarding the fact the right wall continues through without interruption beyond the nave's east wall; it is fairly certain that neither originally had doorways. Because the left wall does not continue through as does the right, nor does it bond with the nave east wall (indeed, it is most imperfectly aligned), and also because a doorway appears let in, it is assumed to have been rebuilt at a late date, doubtless at the time of conversion.

⁷ Since this wall cuts across the room at a point which continues the line of the west wall of the porch, it undoubtedly was involved in a reroofing scheme for the east end of the church.

⁸ At the same time the eastern respond wall of the left colonnade seems to have been rebuilt and a door inserted to allow access into the newly created room; probably the first opening in the colonnade

was blocked, although positive evidence is lacking.
⁹ Again indication of a new roofing scheme on the east.

¹⁰ Since the plan of the church is somewhat irregular, the figures given here are necessarily approximations of the mean. For exact measurements from one point to another consult the drawing of the plan (pl. XXXIII).

Despite minor differences and somewhat askew correspondence, the two colonnades match. Fortunately one plinth was uncovered intact and most of the columns were found fallen in place, enabling the complicated adjustments and compensations of plinths, bases, columns, and capitals to be worked out. At least two sets of reused columns are involved. Columns 1, 2, 3, 4 and 6 (from the east) are of coarse-grained, grey and green veined marble (probably Proconnesian), and are built up on individual, high, square plinths of sandstone blocks surmounted by Attic-type, grey-white marble bases. Columns 5 and 7, of Carystian (*cipollino*) marble, are bigger in all dimensions and their additional height eliminated the need for plinths, their Attic bases even being sunk partly below floor level (these bases are *in situ*). Three types of capitals appear: columns 1, 2 and 4 carried grey-white marble Corinthian capitals of a kind familiar in the Mediterranean area from the middle of the fifth century (pl. XXIX, *a, b*); column 3 supported a sort of Corinthian capital, also of grey-white marble but very poor quality, with enormous acanthus leaves at the four corners (a fairly rare and undoubtedly sixth-century design: pls. XXIX, *d*; XXXII, *a*); columns 5, 6 and 7 had dull, black-grey marble Corinthian capitals cut in a standard second-to-third century form and manner (here certainly two sets are represented, but they are the same in treatment: pl. XXIX, *c*). For both of the colonnades the distance from floor level to the top of each capital abacus was 5.36 m.

The colonnades certainly carried arches (enough of the sandstone voussoirs remained to be able to reconstruct several of the arches), but instead of the usual marble impost blocks between capitals and arch springings there were sandstone blocks with mouldings, each block worked on three sides only. These sandstone blocks are about 34 cm. in height: bottom dimensions 49 × 49 cm. and top dimensions 57 × 57 cm. (pl. XXXII, *d*). All four of the respond walls ended in similar blocks, but without differentiated respond piers or pilasters. Above the arches, on the nave side both left and right, was a string-course, 28 cm. high, composed of sandstone blocks with one convex moulding between two fillets (pl. XXXII, *c*). Several contiguous blocks of the left string-course were found just as they had fallen with the collapse of the left colonnade, so there is no doubt as to their original position. Each string-course must have marked the beginning of a clearstory zone, although here the evidence is indirect. Since no traces of windows are present in the side aisle walls where these are preserved to a considerable height, a clearstory would be the only means of lighting the church. Galleries would have been impossible both because the nave colonnades were not built massively enough for a second level of colonnades to have been feasible, and, more important, because the outer walls of the side aisles simply are not thick enough and substantial enough to have been raised to the height of gallery walls.¹¹ Obviously nave and side aisles had to have timber roofs rather than vaults for the same reasons. Besides, vault stones were found only relative to the apse.

The west wall of the nave will be discussed when dealing with the apse, its east wall when dealing with the porch.

¹¹ Also no gallery fittings were unearthed. Ruling out galleries for the church almost forces the conclusion that the staircase in the right side aisle has to do with the defence wall and not the church itself.

The nave area east of column 4 is paved with squared blocks of sandstone about 5 cm. thick. These blocks follow in the main an irregular pattern, although they are properly joined. From time to time small slabs of marble, some of these cross sections of columns, are inserted. Admittedly large gaps due to time appear today in this part of the nave floor, but destruction by time alone does not account for the fact there are no such sandstone blocks west of column 4. Here is simply a kind of concrete (crushed stone and tile, lime and mud) preparatory floor a few centimetres below the level of the sandstone blocks. Just in front of the chancel a pebble cross is embedded on its surface. It seems certain that a marble pavement, which later was precious enough to rob out while the sandstone blocks were not, originally overlaid this preparatory floor. There is no trace of this preparatory floor below the sandstone paved section; therefore, the sandstone pavement and the preparatory floor must have been laid together and the marble pavement only after an intervening period required for the gathering of materials.

An earlier wall (Roman) of squared sandstone blocks, a continuation of the lower courses of the north wall of the forecomplex, runs under the first 6 m. of the north wall of the right side aisle. It ends abruptly in an orthostate and was preserved by the Christian builders to a height of about 1 m. (its inner surface is still thickly stuccoed). A jutting stretcher course was added before the new side aisle wall was constructed on top. The side aisle wall itself, both above the old wall and along the rest of its length, has inner and outer faces of fairly large, squared, sandstone blocks laid in somewhat indifferent courses with slight rubble fill between faces. Total thickness is hardly more than 50 cm. Opposite the seventh opening in the right colonnade is a doorway marked by orthostates, which at some later date was filled with rubble.¹² Another doorway, similar but smaller, appears at the western extremity of the side aisle wall. This door also was blocked but with squared stones rather than rubble.¹³

The west wall of the right side aisle is the Hellenistic defence wall of the city. This section of the defence wall represents in itself two separate building periods, both prior to the construction of the church, as well as a deviation from the alignment of the whole of the defence wall in this area. The work of both periods consists of ashlar masonry of enormous, drafted, sandstone blocks. The east wall of the side aisle is an internal wall between the room flanking the porch on the right and the side aisle itself (the side aisle and room are linked by a doorway set between orthostates). It is composed of two faces of squared sandstone blocks and bonds with the upper courses of the north wall of the side aisle but not with the eastern respond wall of the right colonnade (because here there is a large orthostate), which it meets at a point 2 m. west from the east wall of the nave.

The only remaining floor in the right side aisle is of beaten earth with some lime (not really concrete). The aisle may never have been paved with stone.

The south wall of the left side aisle is perfectly similar to the north wall of the right aisle except that it incorporates no earlier wall. It has the same doorway

¹² Probably it was filled with rubble at the same time the walls external to the church on the north were constructed, since these walls would have closed off the northern corridor.

¹³ This door likely was blocked at the same time as the staircase was inserted into the side aisle.

framed by orthostates, but here it is opposite the sixth column of the left colonnade (the difference in relation to the colonnades is due to the irregular plan of the church). This doorway now leads into the series of two rooms parallel to the left side aisle along its western part. Since these two rooms are additions to the body of the church, this doorway originally must have communicated directly with the outside, as did its counterpart before it was blocked. The west wall of the left aisle is nothing more than a face of squared sandstone blocks with rubble fill between it and the Hellenistic defence wall. It may have had a large rectangular niche set off by fair-sized vertical slabs, but the wall's surface was so badly decayed this can not be certain. The east wall is just like that in the right side aisle and it functions in the same way (it bonds with the south wall of the side aisle but not with the respond wall of the colonnade). Again there is no sign of a stone pavement.

The apse of the church is built into, really hollowed from, the Hellenistic defence wall which runs north and south along the church at the rear. Yet this apse is external to the church itself. In plan it is a 'U' rather than a semicircle, with a span of 6.5 m. and parallel sides of 1.75 m. in length. Its interior face is made up of enormous, squared, sandstone blocks laid in regular courses. These blocks undoubtedly came from the defence wall, which had to be partially dismantled to accommodate the apse, and their drafting was destroyed in rendering them slightly curved.

The western wall of the nave is hardly more than the eastern faces of the two shoulders of the apse. The semi-bonded southern extension of this so-called nave wall, the blocks somewhat diminishing in size and regularity, becomes the west wall of the left side aisle. The northern extension joins (again a semi-bond) a one-time face of the Hellenistic defence wall; it does not become the west wall of the right side aisle since this role is taken by a differently aligned and separate section of the same defence wall which at this point jogs 1.5 m. to the east.

Immediately in front of the apse were two large *cipollino* columns (the same size as the big columns of the nave colonnades), one on either side of its opening. These columns were placed on marble Attic bases which were sunk partly below the floor level of the nave (here the chancel).

There is no doubt that the apse was stone-vaulted. Its wall is sufficiently buttressed by its being part of the defence wall to sustain a vault, and vault stones were found in the near vicinity. The arms of its 'U' probably received a barrel vault. The final eastern spanning course of this barrel vault might have sprung from the columns flanking the opening of the apse; on the other hand, the columns might have carried a screen arch with a vortex a little lower than that of the vault (because of the height of the columns a lower screen arch seems improbable). Certain is the fact that no three-way screen arch existed since there is no trace of other supports besides the columns on either side of the apse.

The remaining pavement of the apse is the top surface of the footing course of the Hellenistic defence wall's once inner face. These sandstone blocks run under the shoulders of the apse and extend into the nave (chancel) by some 20 cm.; also they raise the floor level of the apse about 12 cm. above that of the nave (therefore 7 cm. above that of the chancel). At a point 2 m. into the apse the sandstone blocks give out. This leaves the curve of the apse unpaved. What was its original state can not be ascertained.

There are no cuttings in the wall surface of the apse indicating a synthronos. However, the blocks were badly decayed. The disappearance of the pavement in the curved zone of the apse eliminates the possibility of evidence here, unless its very absence can be considered positive.¹⁴

The Chancel. As has been stated, the chancel of the church (pl. XXVII, *a*) is contained in that area of the nave which is between the western respond walls of the colonnades. It is marked off from the rest of the nave by narrow, flat, marble slabs which served as footings for the chancel posts (fig. 1, *a*) and screens.¹⁵ The screened part of the chancel was a quadrangle (quite irregular) as wide as the opening of the apse and as long as the respond walls. No screens blocked the opening of the apse since there are no footings or signs of vertical supports, but the other three sides of the quadrangle did have screens. The still visible dowel holes on the upper surfaces of the marble slabs (these give the position of the posts) plus the preserved posts with a single screen channel indicate there were passageways left open in all of the screened sides (one opposite each of the doorways in the respond walls and one leading into the centre of the nave). The two corridors between the respond walls and the screened quadrangle may also have been partly closed from the nave. At least they were set off from the nave by stone thresholds resembling and continuing the post-screen footings and by paving which resembles the borders of that of the quadrangle. Certainly they must be considered part of the chancel.

The main altar occupied the central position in the screened quadrangle. All traces of its foundations have disappeared, but the decayed lime mortar foundation (round) for the south-west ciborium column and the depressions (square) which held the foundations for the south-east and north-east columns are still discernible (pl. XXVII, *b*).

The form and composition of the altar and ciborium must be guessed at, yet the finds from the area, coupled with the evidence from above, offer good clues. The base fragment of a marble colonnette suggests a stone altar-table supported by four or more of these colonnettes (fig. 1, *d*).¹⁶ A combined square plinth and round base cut from a single block of marble (fig. 1, *b*) matches an existing marble column (the plinth-base is 41 cm. high and the column 176 cm.). Together these could well be one of the two forward supports of the ciborium since the square of the plinth fulfills the requirement of the forward foundation depressions. By the same token a fragmentary marble column of greater diameter (and therefore an assumed greater height) than the one just mentioned, could be one of the rear supports set up without a base. Two marble Corinthian capitals, much stylised, were also found (fig. 1, *c*).¹⁷ Their diameters make it impossible that they were the crowning elements of the forward supports,¹⁸ but not improbable that they belong to the larger,

¹⁴ It is unlikely that the area under the synthronos would have been paved.

¹⁵ Enough fragments of the marble chancel screens remain to be able to identify their patterns, and in three cases even their heights (90 cm.). A raised Latin cross superimposed on a raised tondo, a rosette with tendrils pointing to Latin crosses on either side, and small Latin crosses with nothing else are the motifs represented. Some screens must have had perfectly plain surfaces.

¹⁶ The reconstructed colonnette would be almost

identical with those found at Latrun, 35 km. east along the coast, where there is no question as to their function. The Latrun material for the present is unpublished.

¹⁷ These capitals are very similar to the unpublished ciborium capitals of the 'Central' Church at Apollonia.

¹⁸ Conceivably these could have been very different in design and execution, as well as in diameter.

rear columns. The superstructure of this ciborium undoubtedly would have been wood. A makeshift ciborium like this might be offensive to the modern eye, but, considering the difficult procurement of marbles confronting the outfitters of the church, it becomes quite reasonable. After all, the nave colonnades are no more or less a miscellany; actually the proposed ciborium echoes nicely the colonnades themselves.

All of the marble chancel fittings are typical products of the reign of Justinian. The numerous parallels found throughout the Mediterranean well confirm this

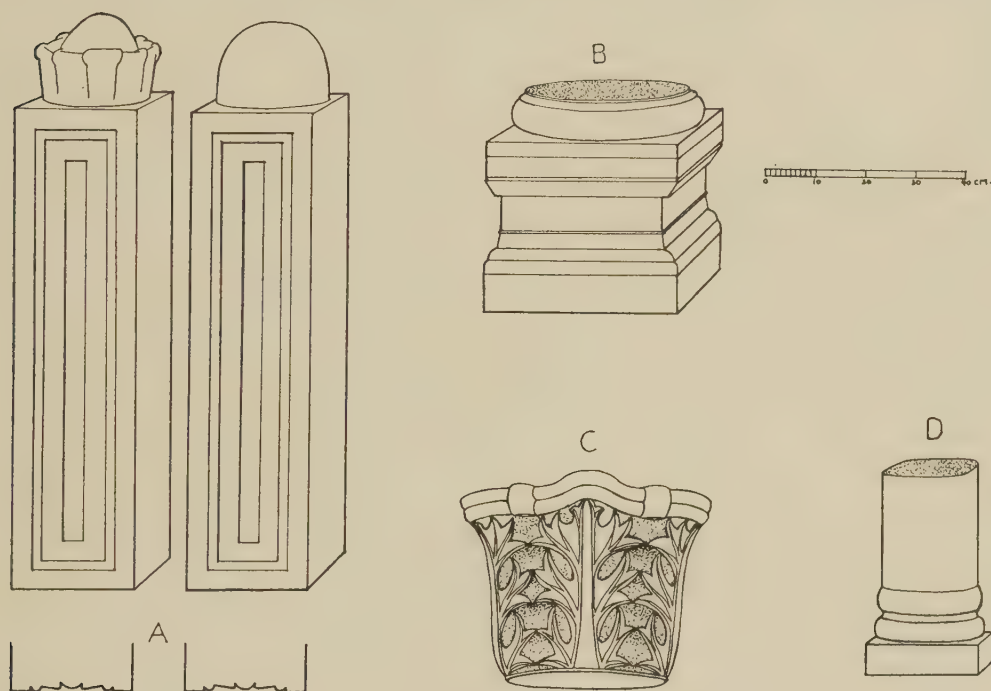


FIG. 1. CHANCEL FITTINGS

date. Doubtless most of these fittings were sent out from the quarries already cut and finished.¹⁹ No local iconography is involved and the pieces are small enough to allow easy shipment in a completed form. Yet, there is not a feeling of specially ordered sets of marbles; rather it appears the builders had to make do with all of the spare pieces to be culled from other structures in the area, structures either slightly earlier or exactly contemporary with this church.

The once rich marble pavement of the chancel exists today in a fragmentary state (pls. XXVII, XXXII, *e*). It consisted of nine fine *opus sectile* panels of geometric pattern (four square corner panels separated by rectangular ones, all these surrounding a large square central panel) of which only the three western panels

¹⁹ The marbles here present are the following: *cipollino* (a few of the chancel screens); Proconnesian (other screens, the chancel posts, the columns, and the colonnette); a coarse-grained white marble with small grey veins (the combined plinth and base); and a grey-white marble (the capitals).

plus bits of others remain (for one of the corner panels see pl. XXXII, *e*). The workmanship of these nine panels is extremely precise and their designs both imaginative and complex; the materials employed are *cipollino*, a white marble, a grey marble with large black veins, a black marble, and porphyry. On the other hand, the borders (these are simply alternating *cipollino* and white marble squares arranged in a lozenge pattern) which encircle the nine panels as a whole are crudely fitted, even allowing for the irregularity of the quadrangle. The only conclusion is that the fine panels were robbed from a Roman structure and set down here as best they could be by the local craftsmen. Small tiles, following the major lines of the patterns, were used as the seatings for the panels, but only mud mortar served the borders. The ciborium was not centred over the panels as a group. Instead, it stood somewhat to the east, so that its centre point coincided with that of the eastern rectangular panel. The pavement caused the screened part of the chancel to be raised some 5 or 6 cm. above the floor level of the nave. The corridors on either side of the chancel quadrangle (paved in a lozenge pattern of small marble squares) maintain this higher level, although below here is the same preparatory concrete floor as found in the nave proper.

A particularly interesting find associated with the chancel and its fittings is the step portion of the ambon, cut from a single block of sandstone (pl. XXXII, *b*).²⁰ It was found upturned on the south-east section of the screened chancel quadrangle (pl. XXVII, *a*), but this could not have been its original location. The foundation tiles and the impressions of former blocks in the mud mortar of the chancel pavement allow for no ambon, and it must therefore have stood just outside the chancel itself, either to the left or right of the chancel opening into the centre of the nave. The cutting of the steps is far from perfect and these irregularities must have been masked in stucco. Even so, it would seem a rather crude affair.

To be noted at this point are the unusual cuttings in the form of an inverted 'T' which appear on the upper halves of the east and west faces of the plinths of the nave colonnades (two plinths are preserved sufficiently in height to reveal these). Their character argues against simple screens between nave and side aisles. Perhaps they held double-sided wooden benches which in a secondary way closed the nave from the aisles.

The Porch and Flanking Rooms. The main entrance into the church is through a rectangular porch, measuring 9 × 4.5 m. Its long dimension is counter to the main axis of the nave and corresponds exactly to its span. In fact, the eastern respond wall of the right colonnade of the nave continues through uninterrupted to become the north wall of the porch. As has already been said, the respond wall of the left colonnade does not continue through, probably due to a rebuilding. The east wall of the nave and the west wall of the porch are the same. This wall forms an artificial or false bond with the south wall of the porch and is composed of rubble fill between two faces of fairly large sandstone blocks. Two giant orthostates mark the nave doorway, the sill of which is still intact. The entrance into the porch from the

²⁰ A similar, but larger, monolithic ambon step, cut down from an inscribed pagan marble base, was found in the 'East' Church of Apollonia during its excavation in 1921; but there, as in the present case, there was no evidence of its precise original

position. Nor have the other excavated churches of Cyrenaica produced evidence of ambons such as certainly existed in some of the churches of neighbouring Tripolitania.

outside is by three broad openings separated by columns (the marble Attic bases were *in situ* and the grey-white marble Corinthian capitals found nearby),²¹ and a flight of two steps leading down to the porch level some 48 cm. below. Probably the columns carried arches rather than lintels in conformity with the rest of the church, but there is no proof either way. The respond walls of this porch colonnade become the east walls of the flanking rooms; the composition throughout is rubble fill between two good faces. The north respond wall bonds with the intersecting north wall of the porch. The south respond wall probably bonded in a similar way with its intersecting wall, but the corner here preserved is formed of two large sandstone blocks, that of the south porch wall taking precedence and breaking the line of the other wall. The porch is paved with sandstone blocks and its level is the same as that of the nave.

The flanking rooms on either side of the porch measure 6×4 m. and follow the lines of the side aisles. All of their walls have been dealt with since they are either continuations of other walls or partitions separating these rooms from already discussed elements. The far corners in each case appear to bond, except for the lower courses of the north-east corner where an earlier east-west wall runs through from the forecomplex. There is a small centre doorway (again set off by orthostates) in the east wall of the left flanking room. Its sill is raised some 40 cm. above the level of the floor of the room and crude steps lead up to it. It was found blocked with rubble.²² On the south side of this door is a long stone bench, or shelf, following along the south wall of the room until the line of the inserted transverse arch. In the south-east corner of the right flanking room there appears a square platform. Actually this is an exterior corner of two intersecting walls of Roman build which run under both the east and the south walls of the room. The Roman wall running south ends just after breaking into the porch area; however, the Roman wall running east continues for some distance as the lower courses of a later forecomplex wall.

The west wall of the porch rather than the colonnade wall seems the more likely to have been the final supporting wall for the nave roof, the porch thereby having a simple lean-to roof of its own. The flanking rooms then could have been roofed by extensions of the side aisle and porch roofs. Another possibility for the flanking rooms would have been to treat them as stubby towers and roof them separately. Certain, however, is the fact they could never have been towers in the true sense since their walls are not substantial enough at the base to sustain any great height. And besides, there is no evidence, such as staircases, for upper stories above either of them.

The original use of the flanking rooms probably was no more than that of storage. Their position at the front of the church and their lack of direct communication with the forecomplex rules out a known ritual function.

The Rooms Adjoining the Left Aisle. The rooms adjoining the left side aisle of the church are an addition, but probably fairly close in time to the construction of the church. One room, 3×3.5 m., acts as a kind of antechamber or vestibule for the

²¹ These capitals are cut to the same pattern as capitals 1, 2 and 4 of the nave colonnades, except that their height compared to diameter is compressed to almost half.

²² It is reasonable that this door should not have been blocked until the Arab period when the area in front was incorporated into the forecomplex.

other and opens in three directions: into the other room, into the side aisle, and directly to the outside.²³ All of the doorways have the characteristic orthostate jambs. The other room measures 8 × 3 m. and is distinguished only by its attenuated shape and a niche in its south wall. The interior face of the south wall of this long room is not continuous with that of the antechamber, being some 50 cm. closer in, yet the wall is one piece. Since the wall was not freed during the excavation, it is impossible to tell what happens on the exterior. The west wall of the long room has a slightly different alignment from that of the west wall of the side aisle, despite the fact they touch. Throughout both rooms the composition of the walls is faced rubble. The logical function of the long room would have been that of a sacristy, there being no other suitable room elsewhere in the building. The niche helps to confirm this function.²⁴

General Observations and Date. The church, considered apart from its forecomplex, was neither particularly unusual in its appearance nor particularly specialised in its function. Essentially it is a simple basilica with arched colonnades and clearstory. Both its interior and exterior lines resemble those of the 'Central' Church at Apollonia²⁵ and, for that matter, many of the sixth-century North African churches.²⁶ More individual features such as plinths for the nave colonnades can be traced to sources as close at hand as the 'East' Church at Apollonia.²⁷ No technical feats are attempted; stone vaulting is kept to a minimum and spans are always reasonable. The church is large in size but not prepossessing. In regard to function, there is even less architectural differentiation and accommodation for the sake of the liturgy and ritual than in either of Apollonia's other two excavated churches. Few special rooms are marked off within its walls, and there are no contained chapels; the baptistery and associated rooms are inserted into the forecomplex, structurally separate from the church building itself (see below). The chancel arrangement is standard for the sixth century. The fact that the church is not oriented is probably explained by the site and not by dogma.

However, the somewhat undistinguished character of the church must be measured against the conditions of its construction and the limits thereby imposed. There must have been complete dependence upon local craftsmen and materials at hand. Proof of this is the absence of any complete set of large marbles as well as smaller marble chancel fittings, and the uneven workmanship throughout. Nonetheless, the church is not without subtleties (only think of the pavement division in the nave and how it relates to the tall and short columns) and decorative richness (the coloured marbles, the chancel pavement, the impost blocks, and the string-course are some of many possible citations). That any such system of spoils and spare parts in the hands of local labour could produce results so gratifying is indeed a tribute to the builders.

²³ *In situ*, sandstone troughs to catch the water from the roof extend out from the exterior face of the south wall of the left side aisle and definitely establish the area here as 'out-of-doors.'

²⁴ Before the addition of the long room the left side aisle itself, with the possible niche in its west wall, might have substituted for a true sacristy.

²⁵ J. B. Ward-Perkins, 'Christian Antiquities of

the Cyrenaican Pentapolis,' *Bull. Soc. Arch. Copte* ix, 1943, pp. 126-131.

²⁶ Consult *IV Congr. Arch. Crist.*; also J. B. Ward-Perkins and R. Goodchild, 'Christian Antiquities of Tripolitania,' *Archaeologia*, vol. 95, 1953, pp. 1-84.

²⁷ Romanelli in *IV Congr. Arch. Crist.*, pp. 274-279; Ward-Perkins, *op. cit.* Ward-Perkins and Goodchild are now preparing a corpus of the Cyrenaican churches.

The necessity of local procurement of marbles provides the best evidence for dating the church.²⁸ The latest capital type used (capitals 3 left and right: pls. XXIX, *d*; XXXII, *a*) can be as early as the beginning of the sixth century. However, capitals 1, 2 and 4 left and right furnish an even later lower limit when their probable source is taken into account. Three of them (capitals 1 and 4 left and right, capital 2 left: pl. XXIX, *a*) match perfectly the capitals in the Central Church²⁹ and, therefore, would appear to be the leftovers from here. Capital 2 right (pl. XXIX, *b*), the same pattern but less precise, could be the attempt of a local craftsman to fill out the number of surplus Central Church capitals to a usable set of four at the time of the construction of the West Church. Capitals 3 left and right might be locally cut at the same time, at least this is implied by their crudeness. Since the matter of completing a set was no longer involved, a more up-to-date pattern was preferred.³⁰

The Central Church is dated in the reign of Justinian on the basis of its mosaics.³¹ Since actual structural members in the West Church seem to be derived from the Central Church, the West Church must be put slightly later in date but still well within the reign of Justinian. General plan and appearance, chancel arrangement and fittings, masonry technique, all these things confirm this date. So also, as will be seen, do features in the forecomplex.

II. THE FORECOMPLEX

The forecomplex is bounded on the east by one of the main north-south streets of ancient Apollonia. This street was respected throughout the various building periods on the site and therefore must have long remained in use. Undoubtedly it always determined the orientation of the structures fronting on it. A western limit for the site was originally the Hellenistic defence wall and later the church itself. As for north and south limits, there were none except those created by the earliest building, walls and elements of which were then incorporated into the succeeding buildings. A water channel or small aqueduct at all times is associated with the area, although it was twice diverted from its course.

The Roman Period (fig. 2). The first structure on the site is presumably late Roman.³² Since digging for its complete plan, even attempting to securely date it, would have involved the destruction of the later Christian material, this was not done. Only when it was necessary to throw light on the Christian installations were the Roman levels probed. Hence knowledge of this Roman building is extremely

²⁸ Coins were few and without telling locations. Their range was from Constantine the Great to Heraclius, but their concentration fell in the last half of the sixth century (this last fact does carry meaning). Pottery finds revealed no more than the coins.

²⁹ Because the capitals of the Central Church are a complete set it is reasonable they were always intended for this church (besides even their earliest possible date makes them too late to be spoils). They could have been cut at the quarries or even right in Apollonia by foreign craftsmen accompanying the shipment. Either way, a surplus might have been created by a change in plan, a not

unlikely occurrence, after execution of the capitals.

³⁰ The blocks of marble for capitals 2 right and 3 left and right could have already existed in Apollonia; it is doubtful whether they were specially imported for the job. Two of the blocks are of extremely poor quality (those of capitals 3 left and right).

³¹ Ward-Perkins, *op. cit.*

³² The third to fourth century A.D. The extensive use of marble revetment, true *opus signinum* floors, pebble-concrete floors, and the way of mounting columns here found are not characteristic of fifth to sixth century Christian building practices in Cyrenaica.

fragmentary and its original function still obscure. A water tank or basin was involved as well as the inflow of a considerable amount of water from the outside by way of the water channel or aqueduct, which then passed through the building itself. A small bathing establishment might be guessed at, but this is dangerous from so little evidence.

Of the exposed remains only two walls are certainly exterior walls of the original structure. These form the legs of an 'L' and bond at the angle. One runs east and west on the north of the site and is preserved for a length of 47 m. (the last 13 m. on the west were later incorporated into the fabric of the north walls of the right flanking room and the right side aisle of the church: see above). The other wall runs north and south along the street; it is discontinuous in that at a point 8 m. from the angle it stops and is not picked up again for some 10 m. (its final south end is unknown). A door on the street is reserved in its north section. This wall has a continuous counterpart 23 m. to the west which begins 2.5 m. from the exterior east-west wall (thus a broad doorway) and continues south for a known distance of 22.5 m. Where the first north-south wall (the exterior north-south wall along the street) stops, it bonds with a wall parallel to the exterior east-west wall. This second east-west wall now extends only 18.5 m. but probably it met the second north-south wall 4.5 m. beyond. At its present westernmost point a short perpendicular wall stretches between it and the northern parallel. The perpendicular wall bonds with neither of the parallel walls, but the original stucco coat turns both of the eastern interior corners. Opposite cuttings in the two parallel walls indicate that the water channel once passed between them almost against the eastern face of the perpendicular wall. So far all of these walls are the same type of squared-sandstone-block construction.

Almost at the point where the exterior north-south wall picks up again, it is met by an unbonded east-west wall linking it with the second north-south wall. Although this east-west wall is parallel to the other two east-west walls (themselves parallel), it is composed of different masonry. It consists of column drums laid side by side counter to the direction of the wall, sandstone and even limestone blocks,³³ and rubble.

Extending north from this third east-west wall is a series of three short perpendicular walls, two just fragments. However, the easternmost of these may have been one and the same with the still-existing wall extending south for 2.5 m. from the second east-west wall. At any rate the area east of this line is a homogeneous space; it contained columns, of which three sandstone bases (perhaps even bases and drums of one piece) are *in situ* but now cut off close to the Roman floor level. The pavement is *opus signinum*. West of this line and to the south there is a fairly extensive area with pebble-concrete floors and a long sandstone bench or ledge, well stuccoed, built against the northern face of the third east-west wall. Again west of this line, but to the north, where the wall extending south from the second east-west wall begins, there is a marble-reveted corner. Seven meters to the west another wall extending south from the same second east-west wall provides the third side of a room. Since the pavement is plain concrete (possibly only a preparatory floor for a marble one), the third east-west wall with its contiguous pebble-concrete floor is not the fourth side of the room and the space here is not homogeneous.

The west wall of the room mentioned above may have joined a western perpendicular spur of the third east-west wall. At least this represents the line of the water channel in the Roman period. To the west of this line, between the second and third east-west walls, there appears to have been a water tank. The relative date of this tank is demonstrated by the waterproof stucco-concrete lining still adhering to the eastern face of the second major north-south wall, a lining which is continuous through and beyond the junction with the north wall of the later, Christian Period II tank. Just south of the third east-west wall, again adhering to the eastern face of the second major north-south wall, are fragments of marble revetment set in good concrete. This also could have been a water tank or basin, but here the evidence is much less certain.

Two other walls belong to the Roman period. Both go off at right angles from the western face of the second major north-south wall, the northern one bonding and the southern one not. The northern wall is 3.25 m. from the exterior, or first, east-west wall and continues for a length of 10.5 m. before turning directly south (this is the Roman corner appearing as a square platform in the right flanking room of the church: see above). The composition of this wall is squared sandstone blocks. The southern wall is 16.5 m. from the northern one, thus beyond the line of the later south wall of

³³ Obviously the limestone blocks are reused fragments. On the surface of one such block there was an inscription in Greek, listing names.

the left side aisle of the church. It has been traced for a distance of only 10 m. It is composed solely of column drums laid side by side, and this fact plus its low level probably means that it is a preserved footing and not the wall itself.

The Christian Period I (fig. 2). Undoubtedly at the same time as the construction of the church, which in itself caused the western portion of the Roman structure on the site to be razed, a suite of three rooms was let into the northern section of the remaining eastern portion. One of these rooms (room 3) was fitted out as the baptistery for the church. Also a long, narrow room was created between the church and this new suite, but it was not made to connect directly with either and thus was not intended as a communicating link. Instead, a long passageway or corridor, external and probably unroofed, along the full length of the outer face of the Roman exterior east-west wall was set off and made use of for communication between the street, the suite of rooms, and the church. The Christian builders took full advantage of the existing Roman walls, destroying none totally but renewing all parts above a line about 75 cm. from floor level. To this renewed work they joined additional walls to form the suite.

The suite of three rooms occupies the area bounded on the north by the Roman exterior east-west wall, on the south by the second east-west wall, and on the west by the second major north-south wall. To create it, a completely new wall was constructed 15 m. east of the second major north-south wall to serve as the eastern boundary. The Roman perpendicular wall between the exterior east-west wall and the second east-west wall was maintained, this now becoming the internal partition wall between rooms 1 and 2 (from left to right). By extending the second east-west wall westward, but on a slightly different line, room 1 was provided with a south wall.³⁴ Four metres east of the first partition wall a new wall was built to separate rooms 2 and 3. The north-south dimension of room 3 (the baptistery) was decreased 2 m. by still another partition wall, this running east and west across its southern end.

A large, almost monumental doorway was opened up in the north wall of room 1, giving access to the external east-west corridor, a smaller door was reserved in its new south wall, and a door leading to room 2 was inserted in its east wall. In order to make passage possible between rooms 1 and 2 the Roman water channel had to be diverted. This was done by means of a new water channel running the full length of the western face of the Roman second major north-south wall. The new water channel in turn necessitated the closing of the broad doorway at the northern end of the same north-south wall (thus room 1 was shut off from the interior space to the west). Three more doors were reserved in new walls: one between rooms 2 and 3; a second in the east wall of room 3; and a third in the same wall of room 3 but external to the room, this last door opening into the space south of the room.

Both the renewed and the entirely new masonry of the walls comprising the suite of rooms resembles that of the Roman builders. It is composed of essentially the same squared sandstone blocks. But the blocks tend to be somewhat smaller and laid less regularly. Also the quite solid construction of the Romans gives way to more and more rubble between good faces of squared blocks. Walls generally are a few centimetres less in thickness. Where new walls join new walls the corners bond, but where new walls meet renewed sections of old walls only artificial or false bonds are effected. All doorways are framed by orthostates.

The baptismal font is installed in room 3 of the suite. It is a rectangular tank 0.8 m. deep with a top dimension of 1.8 × 1 m. and it is sunk into the floor at the centre of the room (pl. XXXI, *b*). Its long axis runs east and west, as does that of the room. Two steps at each end of the tank lead down to the bottom. The

³⁴ This is the only instance where the complete destruction of an old wall may be involved: see above.

APOLLONIA (SUSA)

ROMAN PERIOD



CHRISTIAN PERIOD I

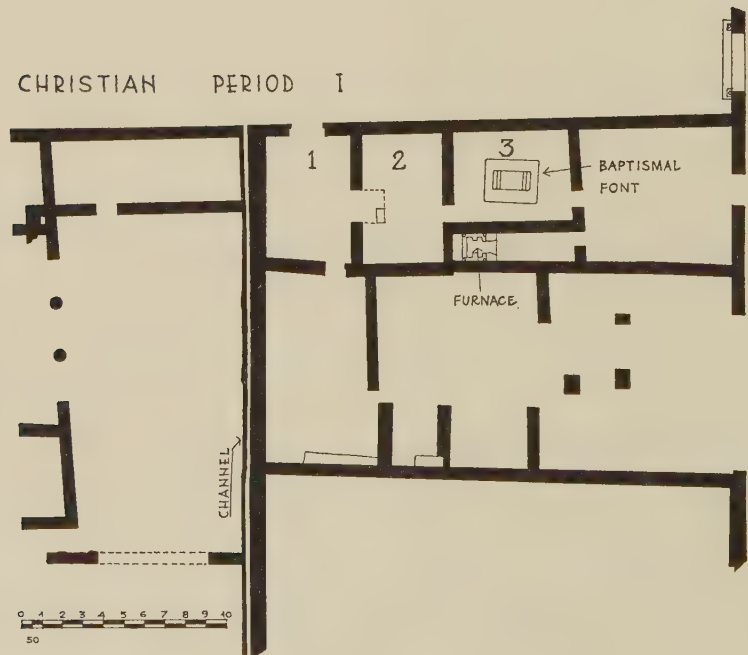
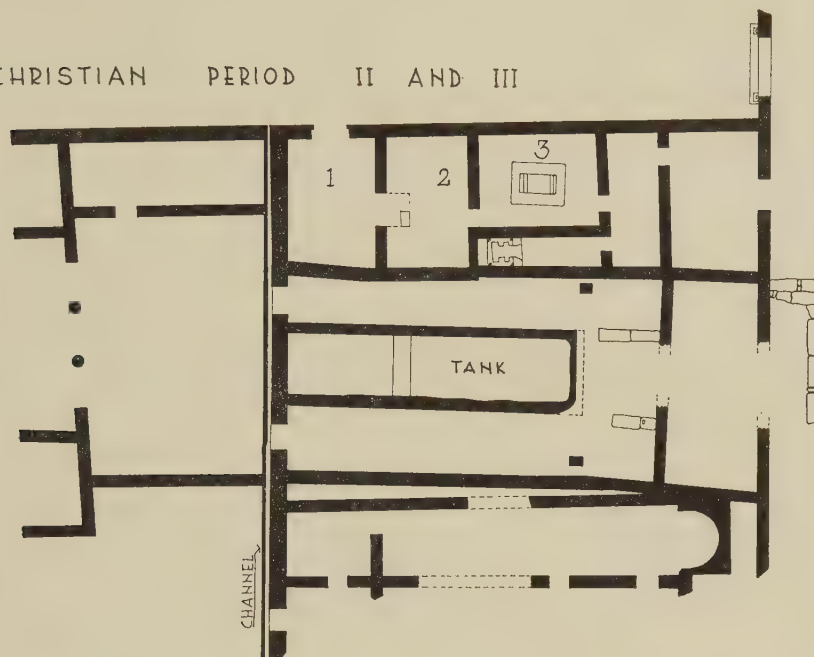


FIG. 2

FORECOMPLEX OF WEST CHURCH

CHRISTIAN PERIOD II AND III



ARAB PERIOD

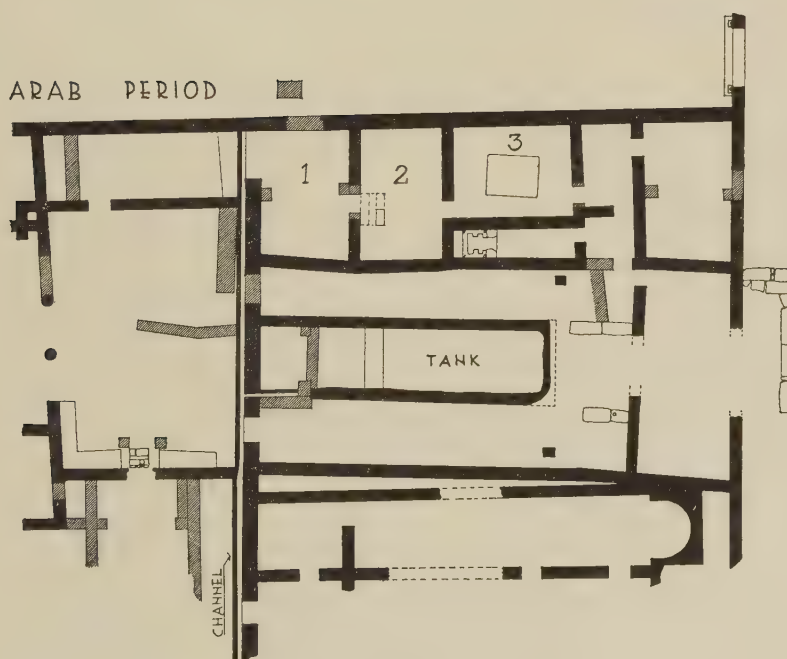


FIG. 3

steps and their risers are faced with a veneer of blue-grey slate; the sides of the tank are coated with waterproof concrete. The line of the pipe to fill the tank can still be traced along to the south.

In the long, narrow space created between the south wall of room 3, the baptistery, and the Roman second east-west wall there are the remains of the hypocaust-like furnace for heating the water of the font. Still intact today are the stokehole and the four brick piers which must have carried some form of metal boiler (pl. XXXI, *a*). The hypocaust walls have two linings of concrete separated by rubble packed in lime mortar.

The pavement of the baptistery was marble, but only a few fragments (among them some *cipollino* slabs of an almost iridescent quality) are left. However, the fine mosaic floor of room 2, the room next to the baptistery on the west, is relatively well preserved (pl. XXX, *a*). It has a border containing animal figures, then an interlace zone, and finally a rectangular centre panel where are depicted a peacock and at least one other bird, possibly a partridge.³⁵ Seventeen centimetres below the mosaic floor is a concrete pavement, doubtless a preparatory floor used as the regular floor until the mosaic could be laid (the same situation as that encountered in the western half of the nave of the church). The mosaic would appear to be Justinianic, but it is best to postpone final judgment until more comparative work has been done.³⁶ Room 1 has now a high level sandstone block pavement from the Arab period. A sounding here revealed the remains of an earlier sandstone block floor 52 cm. below, this lower level being approximately the same as that of room 2.

The Christian Period II (fig. 3). The door in the Christian Period I south wall of room 1 gave access to those sections of the Roman structure which remained unaltered after the creation of the forecomplex (the erection of the church) and the insertion of the suite of three rooms. Its sill corresponds with the Roman floor level, which is approximately the same as that maintained in the suite of rooms. At some unknown later time, perhaps only years or perhaps decades, this door was blocked as a result of a sweeping remodelling of almost all of the forecomplex with the exception of the suite of rooms. This remodelling involved a somewhat drastic change of level as well as plan. What it accomplished is a fairly grand approach to the church from the street, a function probably poorly performed by the Roman structure if, indeed, it served as an approach at all. Only with the remodelling was a main east-west path of entry to the church firmly established.³⁷

The section of the forecomplex south of the suite of rooms was turned into a three-sided atrium (an east-west rectangle 18 × 10 m.) with a large water tank in the middle. A rectangular open courtyard (12.5 × 9 m.) was created in the space between the atrium and the church. Its long axis ran counter to that of the atrium and it occupied the position of the non-existent fourth side (thus the courtyard is the top of the 'U' of the atrium). The atrium did not front directly on the street but was preceded by a room 10 × 4.5 m., the long side of which was the same as the short side of the atrium. A stepped porch, probably a columned portico, of giant sandstone blocks provided an entranceway from the street to this hall-like room.

³⁵ Discussion of the materials, iconography, and date of this mosaic will appear in a forthcoming publication on all of the Cyrenaican mosaics now being prepared jointly by the Cyrenaican Department of Antiquities and the British School at Rome.

³⁶ *Ibid.*

³⁷ The northern external corridor remained the principal means of reaching the baptistery even

after the remodelling. It was only in the Arab period that the suite of rooms containing the baptistery was made once again to connect with the interior of the rest of the forecomplex. Yet the northern corridor could never have been the main path of entry to the church itself. Before the remodelling this might have been from the south.

The east wall of this room preceding the atrium closes the gap in the Roman exterior north-south wall.³⁸ Its footings are column drums, probably from the Roman columns cut down in the space to the west (see above), and its first courses are squared sandstone blocks with rubble fill. Unfortunately this wall is not preserved to a height sufficient to determine the span of the door from the portico, and the sill is gone. The wall common to this room and the atrium is composed similarly of squared sandstone blocks and rubble, and the span of the connecting passage again cannot be determined. This common wall is carried on to the north (after being broken by the rebuilt Roman second east-west wall: see below) until it meets the now renewed Roman exterior east-west wall. In this way two rooms, one almost a corridor, are made from the space to the east of room 3 (the baptistery).

The north walls of both the atrium and its preceding room are provided by the Roman second east-west wall (some parts of which were renewed in Christian Period I: see above), which was now torn down to within 1 m. of the old floor level and rebuilt somewhat thicker of squared-sandstone-block faces and rubble.³⁹ Some of the blocks of this new work are quite large; and during its rebuilding a jutting stretcher course was added to that part of the wall which forms the south wall of room 2. The south walls of the atrium and its preceding room were newly constructed as a single wall over the Roman third east-west wall on a slightly divergent line.

Although the atrium has no real fourth side on the west, it does have a fourth wall cutting it off from the courtyard beyond. This is the Roman second major north-south wall. The part separating the atrium and the courtyard was renewed at this time and a passageway from each of the east-west aisles of the atrium into the courtyard left open (the northern passageway was later blocked). A new south wall was given to the courtyard by extending westward the line of the south wall of the atrium. This wall, however, is not continuous with the atrium wall, nor does it bond with the renewed north-south wall between the atrium and the courtyard. Probably there was a large doorway in its centre leading to the outside, but this has been obscured by the newer Arab-period door now found here (see below). The masonry throughout is the same sandstone block and rubble construction.

The levels of the aisles of the atrium, the room preceding it on the east, and the courtyard on the west are approximately the same. The new level created is about 1.2 m. higher than that of the forecomplex suite of rooms and about 0.5 m. higher than that of the church. The level of the courtyard area must already have been established at the time of the construction of the church building, since the porch of the church was made to accommodate it.⁴⁰ But it took a great deal of filling to bring the atrium level to the same height. The pavement of the aisles of the atrium must have been of sandstone blocks, somewhat irregularly joined (only a fragment in the south-east corner of the atrium still exists). The pavement of the courtyard, a substantial portion of which does remain, was the same. In the other sections nothing is preserved.

A long, narrow water tank (or tanks) 13.5 × 3 m. fills the entire middle portion of the atrium (pl. XXVIII, a). Its bottom is sunk some 30 cm. below the Roman level. Its sides, composed of sandstone blocks and rubble, are raised to a height a few centimetres above the new level of the atrium aisles. On the line of the former Roman water channel or aqueduct (diverted in Christian Period I: see above) there is a low divider in the tank, perhaps thus preserving the footing of the channel. Set at cross axis into the west face of this divider are two *amphorae*. Their purpose is unknown (they do not allow the passage of water from one compartment to the other). They may, however, belong not to this period, but to the Arab period when the tank is furnished with a second divider, again with *amphorae*, and entirely relined (see below). The original lining of the tank is a waterproof concrete composed of finely crushed stone and some tile. On top of the two long sides of the tank appear sandstone column bases at 75-cm. intervals (two bases and three footing blocks, all on the north side, were *in situ*).⁴¹ These bases must have held small columns which in turn carried capitals (these capitals are unidentified) and probably wooden lintels. These columns would have supported the roof over the aisles of the atrium. The space over the tank would have been open, thus permitting the collection of rain water and eliminating sole dependence upon the water channel to the

³⁸ This is a gap only in terms of what is preserved of the Roman-period walls. Certainly there was a wall here before the remodelling since the space to the west was an interior space. At the time this gap was filled the Roman wall on either side was renewed; so also was that part of the Roman exterior east-west wall between the street and room 3 (the baptistery). Thus the angle of the Roman 'L' was reconstituted in its same location.

³⁹ The Christian Period I western extension of

this wall (the south wall of room 1) was also rebuilt and in the process the door from room 1 blocked.

⁴⁰ A sounding in the courtyard produced no pavement or floor at a lower level.

⁴¹ The bases are round and cut with a concave moulding between two fillets, above and below which are torus mouldings; at the bottom of each base is a circular drum probably meant to be embedded in the wall of the tank.

west. The possibility that the tank had a practical function beyond that of water collection and storage cannot be ruled out. But it seems most unlikely that it contributed in any way to the ritual of the church. It did, however, provide a pleasant pool along what was now the main path of entry to the church.

The Christian Period III (fig. 3). Since the line of a new wall to the south is forced to accommodate the continuous south wall of the atrium and the room preceding it along the street, this area of the forecomplex cannot have been rebuilt until after the sweeping remodelling which created the atrium and its preceding room. This new wall represents a structure which extended southward between the Roman exterior north-south wall (already renewed) and the Roman second major north-south wall. Because of present-day occupation only a small east-west strip could be excavated. This was enough to establish several rooms of the building, but it was not sufficient to determine its functional relationship to the church and remodelled forecomplex. By the time of its rebuilding the area here could have lost its close identity with the church and forecomplex, although this seems unlikely. The other extreme would be that it furnished a site for an ecclesiastical residence or even additional ceremonial rooms for the church. The answer must await further excavation in the future.

Found in this area were two adjoining rooms with a common east-west longitudinal axis. One room is extremely long and narrow, measuring 14×3.25 m., with an internal semicircular apse on its eastern end contributing another 1.75 m. to its length (the shoulders of the apse extend out just slightly from the lines of the walls); the other room, 4×3.25 m., is a western antechamber for the first. Both the north walls and the south walls of the two rooms are continuous with one another. Their continuous north wall is roughly parallel to the south wall of the atrium. It is only 80 cm. distant from the atrium wall at the furthest point, this being on the west, and they actually touch on the east.⁴² The north-east exterior corner of the long room (the exterior corner of the apse) is actually cut back on the north to allow for the already existing south wall of the room preceding the atrium (the south walls of the atrium and its preceding room are one piece: see above).

The east wall of the long room (the east face of the exterior rectangle of the apse) falls short of the Roman exterior north-south wall (already renewed) by some 1.5 m.⁴³ But the west wall of the antechamber is a now renewed section of the Roman second major north-south wall. The wall separating the long room from its antechamber was poorly preserved. It is possible there was no door between the rooms (and hence the one room not an antechamber) but this seems doubtful. What is preserved of this common wall bonds with neither the north nor the south continuous walls. However, this wall is picked up again on the other side of the south wall. The part of the continuous south wall belonging to the long room was destroyed except for a few blocks from its lower courses on the east and a rubble foundation ledge along the rest of its length. Two door-thresholds could be made out, both of these falling in the eastern part of the wall. Also there seemed to be a perpendicular wall extending south on line with the shoulder face of the apse. The part of the continuous south wall belonging to the antechamber fared much better and here a door is plain, although not set off by orthostates. One metre south of the continuous south wall, in the renewed Roman second major north-south wall, there is a good-sized door sill with steps leading down to the level of this walled space. The sill is high, in order to get over the Christian Period I water channel. Whether originally this door opened to the exterior or only into another room is not known. In the Arab period it did connect two interior spaces (see below).

The masonry of the walls of the long room and its antechamber is significantly different from that of any of the previous periods (pl. XXVIII, *b*). It is still rubble fill between faces of sandstone blocks. But the blocks are smaller and whereas the outer surface of each block is uniformly squared, the rest of the block

⁴² Where these walls touch it is perfectly clear that the southern wall (the north wall of the long room) is built up against the northern one (the continuous south wall of the atrium and its

preceding room); this proves conclusively its later date.

⁴³ In this small rectangular space there were two poorly constructed east-west walls of uncertain date.

tends to be somewhat wedge shaped. And there is generally more rubble fill between faces. The blocks are laid in almost perfect horizontal courses and an attempt is made at good ashlar construction. The blocks are not laid dry but in a poor mud-lime mortar. In some places both vertical and horizontal chinks are plugged with small chips. The workmanship is careful throughout and the total effect quite striking. It is important to note that late in the Christian period relatively fine masonry was still being executed.

The whole of the pavement of the long room and its apse was mosaic, small fragments of which are preserved today. The patterns of the room and apse mosaics are not continuous but the materials and size of the *tesserae* leave no doubt that they were laid together.⁴⁴ For the room only a small patch of the interlace border remains (pl. XXX, *c*); in the apse there is another interlace border, but much smaller, and part of a grape vine design (pl. XXX, *b*).⁴⁵ The pavements of the antechamber and the space to the south have disappeared.

The Arab Period (fig. 3). The last changes in the forecomplex reflect a secularisation parallel to that of the church building. There can be no doubt that these changes come in the Arab period. But the invasion did not cause as much damage to the forecomplex as it did to the fabric of the church, since restoration work is minor. Also, if a consistent masonry technique is assumed for any one time, the alteration and rearrangement here effected must have continued for some years, indicating a fairly long secular life for the forecomplex. The use of the forecomplex was put to cannot be told. Obviously it was dependent upon the structure to the south, which even more now than before suggests an official residence of some sort.

On the basis of technique and function the Arab changes to the forecomplex fall into groups. Some doorways are blocked with nicely squared sandstone blocks perfectly in harmony with the surrounding walls. These include the main entrance from the external corridor on the north into the suite of rooms containing the baptistery; the door from the street into the same suite of rooms; and the passageway from the north aisle of the atrium into the courtyard. Associated with this work is the insertion of an east-west transverse arch in the easternmost room of the north section of the forecomplex (the room created on the street and to the east of the suite of rooms containing the baptistery); the narrowing of the east door into room 3 (the baptistery); the raising of the floor level 52 cm. in room 1; the insertion of an east-west transverse arch in room 1; the narrowing of the door between rooms 1 and 2;⁴⁶ the probable reopening of the passageway between room 1 and the interior space to the west;⁴⁷ the construction of a faced rubble wall extending 4.5 m. south along the water channel from the north wall of the courtyard; and the erection of another faced rubble wall across the west end of the interior space to the west of room 1 of the suite.

A favourite Arab masonry technique is the use of flint stones and other uncut rocks laid in an imperfect herringbone fashion. There are three groups of changes executed in this style. The first is the insertion of a wall, but still allowing passage, across the corridor-like space immediately east of room 3 of the suite (the baptistery) almost on line with the south wall of this room; the erection of a short north-south wall in the interior north-east corner of the atrium and the lowering of the level of this corner to match that of the space to the north; the opening of doors in the two walls forming this same corner (thus passage is permitted from the room preceding the atrium into the hypocaust and also into the suite of rooms to the north). The second is the further division of the water tank in the middle of the atrium at a point 2 m. from its western end, and the relining of the entire tank. The third is the creation of an impressive doorway in the south wall of the courtyard (the door was

⁴⁴ The apse floor, a few centimetres higher than that of the room, is set apart by a vertical marble sill across the opening of the apse.

⁴⁵ Again it is necessary to await the forthcoming publication on the Cyrenaican mosaics for a complete discussion of materials, iconography and date.

⁴⁶ The narrowing of both of the immediate approaches to the baptistery must signal its end as such and the secularisation of the suite of rooms.

⁴⁷ With the raising of the floor level in room 1 the water channel running past the passageway and formerly blocking it could be gotten over without great difficulty.

flanked with columns, the bases of which are *in situ*; one of the capitals was found nearby);⁴⁸ the placing of a rubble bench in the courtyard on either side of the doorway and also along the west side; the construction of two walls which extend south from the south wall of the courtyard and flank the doorway; the spanning of these two walls with an arch;⁴⁹ the joining of the line of the arch and the south-east corner of the church by means of a short wall.

Very late in time and after the forecomplex had ceased to function as a unit a wavering east-west wall was added across the middle of the courtyard, and a pipeline from the water channel to the extreme north-eastern part of the forecomplex was built, proving that the tank was no longer used but that the water channel still carried water. More of the doors of the forecomplex were crudely blocked before signs of occupation disappear completely.

General Observations and Date. The sweeping remodelling of the forecomplex considerably enhanced the church and its site. Besides providing a suite of ceremonial rooms vital to the church, it afforded a gathering place for the congregation. It tied the site together into a tighter religiously functioning unit and made this unit comparable to those of the other two excavated churches at Apollonia. At the same time it did not eliminate the supply of water to the community. As regards the structure represented by the long room, little can be said until it has been fully excavated. Present evidence somewhat points to an ecclesiastical residence, yet this is far from certain.

The creation of a second baptistery at Apollonia, and its possible association with an ecclesiastical residence, all within a fairly tight unit, opens the question of a sectarian church. One of the authors of this report, Mr. Widrig, is tending to believe more and more from the archaeological evidence that a strong sectarian movement was operative in Cyrenaica in the sixth century. But it is too early to comment on this further.

The materials of the forecomplex are again local. However, the craftsmen who directed the laying of the mosaic pavements undoubtedly were foreign. The quality of the mosaics is high and obviously the work of practised men.

The chronology of the forecomplex is relative and has already been commented upon for each successive period. The mosaic floors give the only fixed points. The room 2 mosaic appears to confirm the Justinianic date for the church and the provision of the suite of rooms. Because the mosaic of the long room is not far in style from that of room 2 the completion of the Christian forecomplex cannot be too distant in time from its first beginnings.

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RICHARD GOODCHILD

⁴⁸ The capital is of grey-white marble and represents a type similar to, but not from the same set as, the nave capitals 1, 2 and 4; the abacus of this capital is very large in proportion to its body.

⁴⁹ The arch proves beyond all doubt that the

space here is an interior space (this is already suggested by the treatment of the doorway); however, this may not have been an interior space until the Arab period.

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ETRUSCAN CIPPUS IN THE ASHMOLEAN MUSEUM: SIDES A (*above*) AND B (*below*).
SCALE, APPROX. 3 : 10 (pp. 1-5).

(Photos: Ashmolean Museum)



ETRUSCAN CIPPUS IN THE ASHMOLEAN MUSEUM: SIDES C (*above*) AND D (*below*).
SCALE, APPROX. 3 : 10 (pp. 1-5).

(Photos: Ashmolean Museum)



TWO INSCRIPTIONS BESIDE THE VIA SALARIA NEAR RIETI (p. 6) -
(Photos: C. C. Van Essen)



(Photo Union of Institutes)

THE ROUND TEMPLE IN THE FORUM BOARIUM (pp. 7-32)

(Note: the pock-marking of the surface of the socle and the beam-sockets are both post-classical features: the brickwork below the column-bases is modern.)



(Photo: Union of Institutes)

THE ROUND TEMPLE IN THE FORUM BOARIUM (pp. 7-32).



(a) MARBLE COLUMN-BASE

(Photo: M. H. Ballance)



(b) TUSA FOOTINGS FOR STEPS

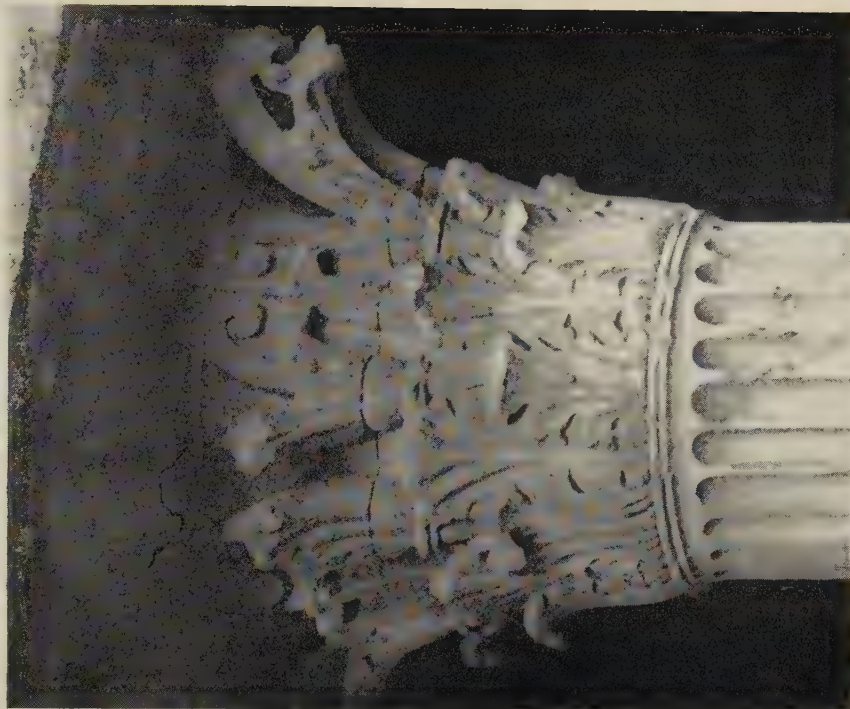
(Photo: J. B. W. P.)

THE ROUND TEMPLE IN THE FORUM BOARIUM (pp. 7-31).



(Photo: Union of Institutes)

(a) CAPITAL, No. 4 : TYPE A.



(Photo: M. H. Ballance)

(b) CAPITAL, No. 10 : TYPE B.

THE ROUND TEMPLE IN THE FORUM BOARIUM (pp. 7-31).



Top left and bottom right IN THE VATICAN
MUSEUMS

Top right and bottom left: BESIDE THE TEMPLE.

THE ROUND TEMPLE IN THE FORUM BOARIUM. FRAGMENTS OF COFFERING (pp. 24-26).

(Photos: J. B. W. .)



*a, b (left). CORNICE FRAGMENTS BESIDE THE TEMPLE.
c (above). MARBLE ANTEFIX IN THE VATICAN MUSEUMS.*

(Photos: a, J. B. W. P.; b, D. E. S.; c, Vatican Museums)



THE ROUND TEMPLE IN THE FORUM BOARUM (p. 24).



(a) ROME, PALAZZO DEI CONSERVATORI. LIMESTONE CAPITAL (pp. 27-28).



(b) ROME, ANTIQUARIUM COMUNALE. TRAVERTINE COFFERING (p. 25)

(Photos: Musei Comunali)



(Photo: Musei Comunali)

(a) ROME, ANTIQUARIUM COMUNALE. TRAVERTINE
CAPITAL (p. 23)



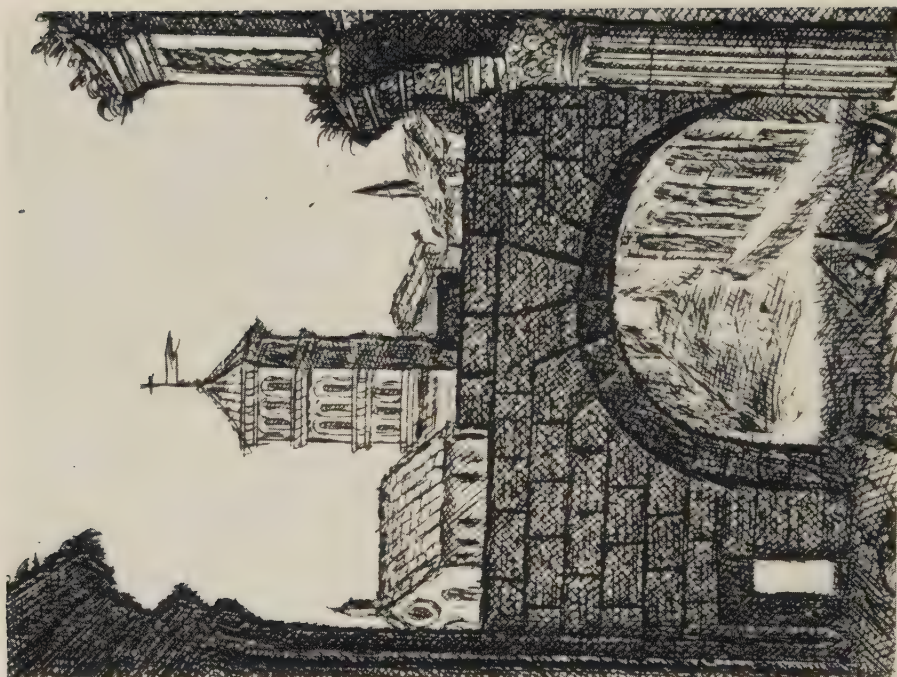
(Photo: D. F. S.)

(b) ROME, TEMPLE OF MARS
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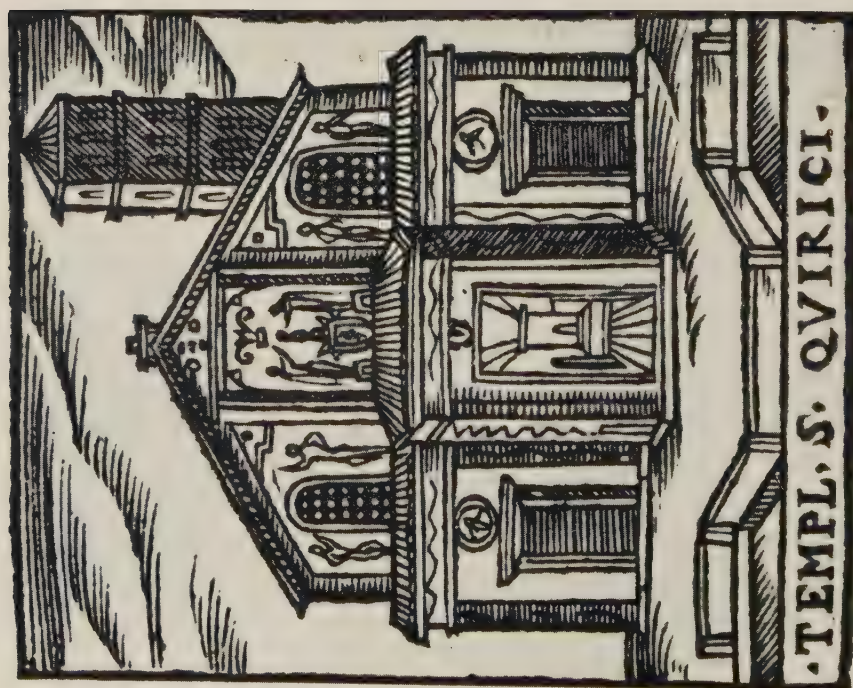


(Photo: Gab. Fot. Naz.)

(c) ROME, MUSEO NAZIONALE ROMANO.
MARBLE BOWL (p. 26)



(b) ALO' GIOVANNOLI, *Vedute degli Antichi Vestigi di Roma* (1618),
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(a) G. FRANCINO'S VIEW OF THE CHURCH, PUBLISHED IN 1588

ROME, CHURCH OF SS. QUIRICO E GIULITTA (pp. 33-50)



(a) THE LOWER PART OF AISLE 'A'

(Photo: G. U. S. C.)



(b) THE FOUNDATION OF THE ORIGINAL ALTAR

(Photo: G. U. S. C.)



(a) JUNCTION BETWEEN WALLS b' AND F-F', WITH REMAINS OF *Opus Sectile* IN THE AREA TO THE SOUTH OF THE ORIGINAL ALTAR



(b) EXTERIOR OF THE NORTH-EAST CORNER OF THE NAVE
ROME, CHURCH OF SS. QUIRICO E GIULITTA (pp. 42-44)

(Photos: G. U. S. C.)



ROME, CHURCH OF SS. QUIRICO E GIULITTA (pp 38, 44)
SOUTH WALL OF THE NAVE

(Photo G. U. S. C.)

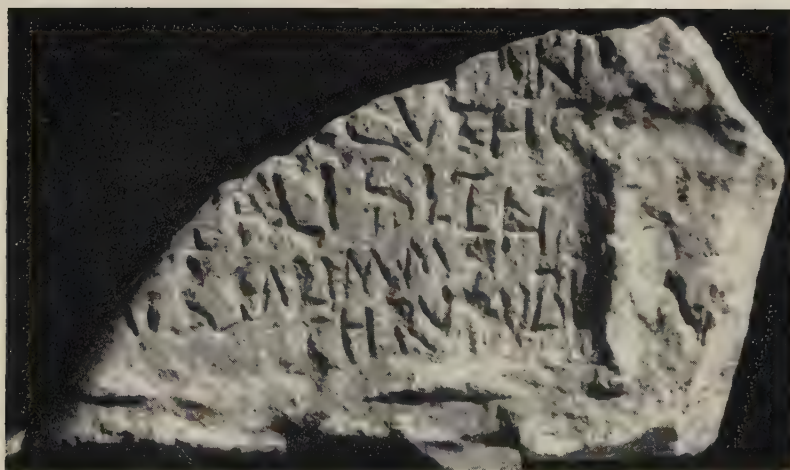


ROME, CHURCH OF SS. QUIRICO E GIULITTA (p. 44)
WEST PART OF SOUTH WALL

(Photo: G. U. S. C.)



(a) No. 1, FROM AIN EL-AUENIA



(b) No. 7, FROM MUAGEN NGORTA, WADI SCETAF

INSCRIPTIONS FROM TRIPOLITANIA (pp. 51-54)

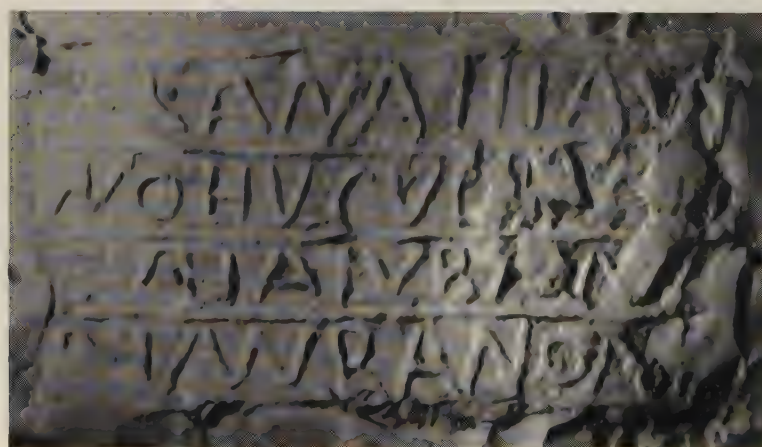
(Photos: Antiquities Dept.)



(a) No. 2, FROM AIN EL-AUENIA



(b) No. 3, FROM AIN EL-AUENIA



(c) No. 6, FROM WADI UMM EL-ACHERAB (SQUEEZE)

INSCRIPTIONS FROM TRIPOLITANIA (pp. 51-54)

(Photos: a and b, Antiquities Dept., c. R. Johnson)



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NO. 5, FROM GASR ISAWI, WADI MIGDAL

(Photos: O. Brogan)



(a) VIEW OF THE BATHS, BY CANINA (1847)



(b) THE RIVER WALL, TOWARDS THE STREAM
VEII, VALCHETTA BATHS (pp. 55-69)

(Photo: M. H. Ballance)



VEII, VALCHETTA BATHS (pp. 55-69). THE *Caldarium* FROM THE NORTH-EAST (*above*) AND FROM THE WEST (*below*)

(Photos: G. D. B. J.)



(a) THE *Tepidarium* AREA

(Photo: M. H. Ballance)



(Photos: M. H. Ballance)

(b) (left). THE *Tepidarium* STOKEHOLE

(c) (right). HYPOCAUST OF THE *Tepidarium* APSE



(a)

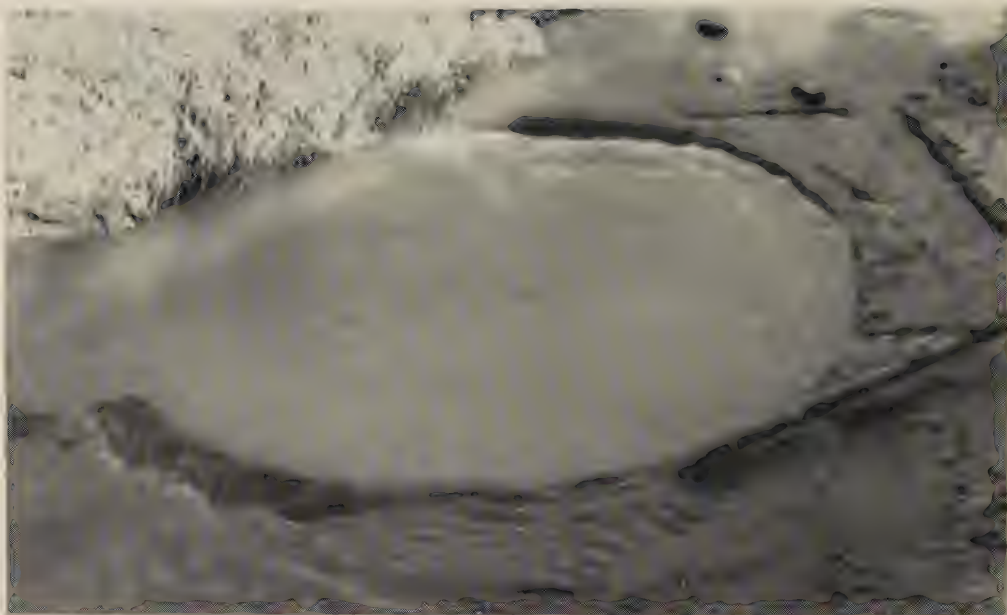
(Photo: G. D. B. J.)



(b)

(Photo: M. H. Ballance)

VEII, VALCHETTA BATHS. THE *Tepidarium* HYPOCAUST
(pp. 64-65)



(4) CIRCULAR BASIN IN THE PRESENT STREAM-BED (p. 66)

(Photo G. D. B. J.)



(A) ROCK-CUT HOLES AND OTHER EARLY FEATURES (p. 65)

(Photo: G. D. B. J.)

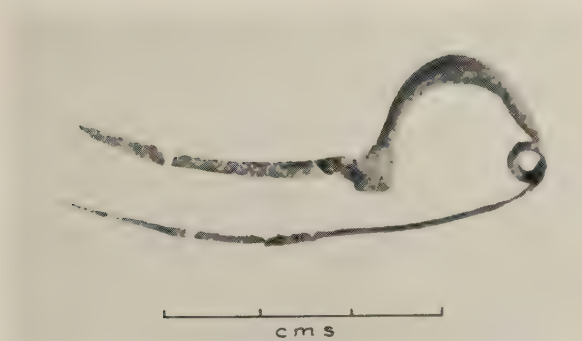
VEII, VALCHETTA BATHS



(a)



(b)



(c)

VEII, VALCHETTA BATHS. AXE OF GREEN SERPENTINE (*above*) AND BRONZE BROOCH (*below*) FROM THE FILLING OF A ROCK-CUT HOLE BENEATH THE *Tepidarium*. SCALE 1 : 1. (p. 66)

(Photos: M. H. B. and G. D. B. J.)



(a) THE NAVE, FROM THE SOUTH-EAST



(b) THE FORECOMPLEX, FROM THE SOUTH-EAST. APOLLONIA, WEST CHURCH (pp. 70-90)

(Photos: Widrig)



(a) LOOKING TOWARDS THE NAVE

Photo Dept. of Antiquities



(b) PAVEMENT, WITH SEATINGS FOR CIBORIUM COLUMNS
APOLLONIA, WEST CHURCH: THE CHANCEL (p. 76)

(Photo: Widrig)



(a) THE WATER TANK OF THE ATRIUM (p. 87)



(b) THE NORTH WALL OF THE LONG ROOM (p. 88)

APOLLONIA, WEST CHURCH: THE FORECOMPLEX

(Photos: Widrig)



(a) CAPITAL 4 RIGHT



(b) CAPITAL 2 RIGHT



(c) CAPITAL 7 RIGHT



(d) CAPITAL 3 LEFT

APOLLONIA, WEST CHURCH : CAPITALS OF NAVE (p. 73)

(Photos: Widrig)



(a) Room 2 (p. 86)



(b) (left). APSE OF LONG ROOM (p. 89)

(c) (above). BORDER OF LONG ROOM (p. 89)



(Photo: Dept. of Antiquities)

(a) HEATING ARRANGEMENTS FOR THE BAPTISMAL FONT



(Photo: Widrig)

(b) THE BAPTISMAL FONT

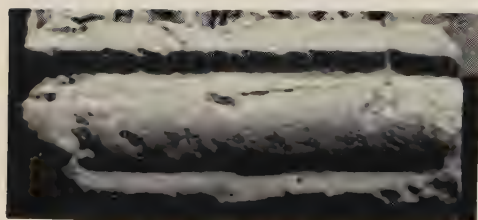
APOLLONIA, WEST CHURCH. THE BAPTISTERY (pp. 83-84)



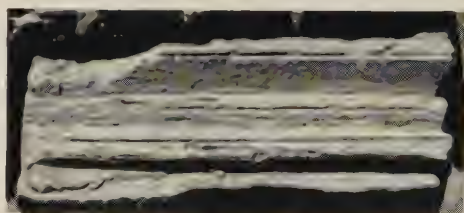
(a) CAPITAL 3 RIGHT (p. 73)



(b) AMBON STEPS (p. 78)



(c) STRING COURSE (p. 73)



(d) IMPOST MOULDING (p. 73)



(e) CHANCEL, *Opus Sectile* PAVING (pp. 77-78)

APOLLONIA, WEST CHURCH

(Photos: Widrig)

APOLLONIA (SUSA)
WEST CHURCH AND FORECOMPLEX

SCALE 0 1 2 3 4 5 6 7 8 9 10 Mts.
50

